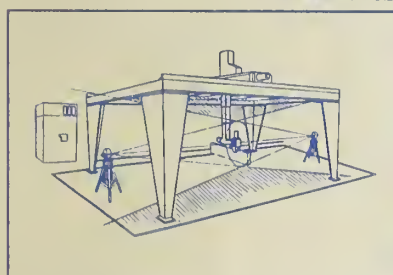
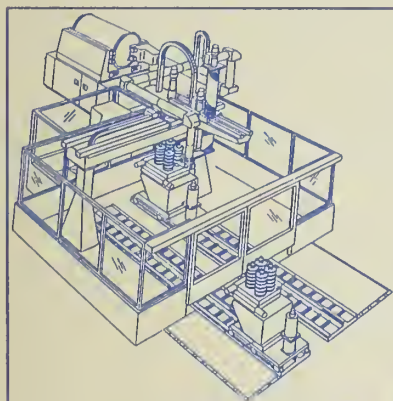


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Current Industrial Reports

Manufacturing Technology: Factors Affecting Adoption 1991



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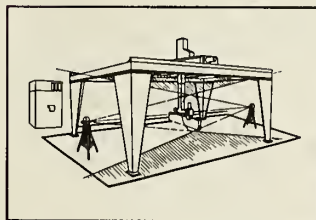
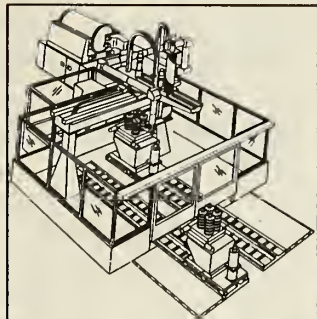
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Manufacturing Technology: Factors Affecting Adoption 1991



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Manufacturing Technology: Factors Affecting Adoption 1991

INTRODUCTION

Although advanced technologies can play a critical role in improving American industry's position in the global economy, only limited information is available on their use. Data on the level and trend of diffusion, use, and factors affecting adoption of advanced technologies will provide important information that is missing for analyzing productivity, investment and competitiveness. More comprehensive information is also needed to better understand the application of technology to the manufacturing process, how its use is changing over time, and how advanced technology is influencing manufacturing operations.

In an effort to address this important issue, the Bureau of the Census began developing a series of surveys designed to measure the prevalence and patterns of use of advanced manufacturing technologies and to expand understanding of key factors in the adoption of technology.

In 1988, the Bureau of the Census conducted the first Survey of Manufacturing Technology (SMT). The survey measured the prevalence of 17 advanced technologies in selected manufacturing industries. In addition, information was collected on future plans to use technology and, if there were no plans to use, the reasons why not. Finally, data were collected on selected characteristics of manufacturing plants using and not using technology. These characteristics included employment size, age of plant, manufacturing process used, market for most products, market price for most products, and whether or not products were shipped to Federal Government defense agencies or prime contractors to those agencies.

The survey results were published in May 1989 in a report titled, "Manufacturing Technology: 1988." The report was enthusiastically received by policy-makers in Government, decision-makers in private industry, and analysts with an interest in the use and diffusion of technology in the manufacturing sector. Clearly, there was a need for accurate, reliable information on the prevalence of advanced technologies. However, it became equally clear, based on feedback received from the data users, that more detailed information concerning the factors affecting the adoption of advanced technologies by manufacturers was also needed.

Based on this, in 1990, the Census Bureau began developing a second technology survey aimed at gathering information about factors that may affect manufacturers' decisions to adopt technology. The goal was to produce reliable measures of how technologically advanced various industries are; past and future levels of investment in technology; the length of time it takes to acquire technology; the cost of training associated with the introduction of technology; the most significant problems encountered in acquiring technology; the most significant barriers to acquisition; the major benefits derived from technology; and selected plant characteristics including employment size, age of plant, unionization, percentage of products exported, total value of all goods and services, shipments to Federal defense agencies or prime contractors, and foreign ownership.

During the developmental phase of the project, the Census Bureau consulted with a broad cross-section of Government, private industry and academic experts to obtain their guidance and feedback. All agreed that there was a need for the data and that no other data sources were available. Based on the feedback received from these groups, we proceeded with our development of the second survey.

Scope of the Survey

The SMT is a sample survey of 10,088 establishments with 20 or more employees selected to represent a total universe of 44,818 manufacturing establishments classified in Standard Industrial Classification (SIC) Major Groups 34 through 38. After adjustments to account for plants that were out of business, the universe was estimated at 42,250.

SIC Major Group	Description
34	Fabricated Metal Products
35	Industrial Machinery and Equipment
36	Electronic and Other Electric Equipment
37	Transportation Equipment
38	Instruments and Related Products

These major groups accounted for 43 percent of all employees and value added as reported in the 1987 Census of Manufactures.

The SMT questionnaire was designed to measure the degree to which manufacturing establishments use technologically advanced equipment and software and to what degree plant characteristics influence usage. The equipment and software were categorized into four general areas: design and engineering, fabrication and machining, materials handling, and inspection and quality control.

For a complete description of the topics covered by the survey, see appendix A, Report Form.

Methodology

Test of Procedures and Methods. In 1988, a similar survey, "Manufacturing Technology: 1988" was conducted to collect information on the prevalence of 17 advanced technologies. Since this had been the first survey of its kind, a test of the survey procedures and methods was conducted. This test consisted of mailing questionnaires to a non-random sample of 300 manufacturing establishments. The test was designed to provide information on the appropriateness and accuracy of the questions, clarity of survey definitions and instructions, extent of respondent burden, identification of the person most knowledgeable about the company and the company's plans to adopt advanced technologies, plant versus company-level reporting, and response rates. The results of the test indicated that the questionnaire and survey procedures worked well and only minor modifications to the questionnaire were required.

Since the 1988 test had been successful, questionnaires were mailed to only a few establishments for the current survey. The same type of input was requested in regard to the questionnaire, including the clarity and appropriateness of questions and burden estimate. Feedback resulted in some minor changes, including the rewording of questions to emphasize that the survey is plant based and that the questionnaire should not be completed for all plants within a company. This particular change also alleviated concerns regarding the response burden estimate.

Mailout and Followup Activities. The sample of 10,088 establishments with 20 or more employees was mailed in October 1991. Two mail followups were made to delinquent cases during November and December. A nonresponse followup was conducted by telephone for approximately 1,250 delinquent cases. By the close of

the telephone followup, approximately 800 delinquent cases remained. A third form was mailed to the remaining delinquent establishments, resulting in the completion of an additional 360 forms before closing out the data keying operations. The data collection phase of the survey was completed in May 1992.

Survey Response Rates. The information presented below provides a breakdown of the response and nonresponse for the survey:

8,999	Completed reports
315	Out of business
81	Out of scope of the survey
526	Refusals
114	Postmaster returns (no better address found)
53	Miscellaneous (contact unavailable, sold/no successor found, plant idle, etc.)
<hr/> 10,088	Total sampled cases mailed

From this information, a response rate that reflects the percentage of sampled plants that returned completed questionnaires was calculated. For the SMT, the overall response rate was 92.8 percent. It was calculated as follows:

1. Total sampled cases mailed (10,088) - out-of-business cases (315) - out-of-scope cases (81) = total active, in-scope cases (9,692)
2. Total completed cases (8,999) / total active, in-scope cases (9,692) = response rate (92.8 percent)

Another useful indicator is the refusal rate. This rate is based on the number of refusals received from plants actually contacted and reflects the degree of cooperation with the survey. The refusal rate for this survey was 5.5 percent. It was calculated as follows:

1. Total sampled cases mailed (10,088) - out-of-business cases (315) - out-of-scope cases (81) - postmaster returns (114) - miscellaneous cases (53) = total cases contacted (9,525)
2. Refusal cases (526) / total cases contacted (9,525) = refusal rate (5.5 percent)

Chapter 1. General Summary

The SMT was designed to measure the degree to which manufacturing establishments use technologically advanced equipment and software and the degree to which plant characteristics influence usage. The survey collected information on both the costs and benefits associated with the various types of technologically advanced equipment, as well as on factors affecting adoption. The technologically advanced equipment and software were categorized into four areas: design and engineering, fabrication and machining, materials handling, and inspection and quality control. Listed below is a brief description of each technology classification, followed by a general summary of the survey results. For a complete definition of the individual technologies included in each group, see appendix B, "Explanation of Terms".

1. **Design and Engineering:** Computer-aided design (CAD) and/or computer-aided engineering (CAE), CAD output used to control manufacturing machines (CAD/Computer-Aided Manufacturing (CAM)), digital representation CAD output used in procurement activities.
2. **Fabrication and Machining:** Flexible manufacturing cell(s)(FMC) or flexible manufacturing systems (FMS), NC/CNC machines, materials working laser(s), pick and place robot(s), and other robots.
3. **Materials Handling:** Automatic storage and retrieval system (AS/RS) and automatic guided vehicle system (AGVS).
4. **Inspection and Quality Control:** Automated sensor-based inspection and/or testing equipment used on incoming or in-process materials or on final products; local area network (LAN) for technical data; LAN for factory use; intercompany computer network linking subcontractors, suppliers, and/or customers; programmable controller(s); and computer(s) used for control on the factory floor.

Of the four technology groups, design and engineering equipment appears to have the highest usage rate, with 23 percent (9,920) of the plants indicating that 75 percent or more of their operations depend on this type of equipment. Materials handling equipment seems to be used least, with 41 percent (17,448) of the plants reporting that this equipment is not applicable to their operations and 43 percent (18,167) relying on it for less than 10 percent of their operations. Usage of technologically advanced equipment is expected to increase only slightly over the next 3

years. The number of plants using this type of equipment for less than 10 percent of operations is expected to decrease by an average of 8 percent for all technology groups, while the number of plants reporting technology usage in each of the remaining categories (10 to 24 percent, 25 to 49 percent, 50 to 74 percent, and 75 percent or more) is expected to increase by 1 to 2 percent.

The majority of plants reporting usage of equipment in each of the technology groups indicate total investment in technologically advanced equipment and software to be less than \$100,000 over the past 3 years. Twenty-five percent (10,723) of plants using fabrication and machining equipment reported investments of \$100,000 to \$1 million, which is the highest in this category for any of the technology groups. For those establishments using technologically advanced equipment, the time needed to install the equipment and have it fully operational was generally less than 3 months.

The impact of technologically advanced equipment and software on education and training costs appeared to be most significant for plants using design and engineering, and fabrication and machining equipment, where approximately 39 percent of plants reported both moderate and marginal increases. Sixty percent (25,559) of plants reported that education and training costs associated with materials handling equipment were not applicable to operations. For those plants that incurred costs, the amount was generally less than \$10,000 for all four technology groups.

The most commonly reported problem in the acquisition or use of technologically advanced equipment and software over the past 3 years was overall cost, as indicated by an average of 66 percent of plants reporting in each of the technology groups. Cost of education and training and lack of financial justification were the second and third most cited problems, respectively.

The majority of plants in each of the technology groups have no firm plans to acquire additional equipment. Minor upgrades were anticipated by approximately 25 percent of plants using design and engineering, and fabrication and machining equipment. Costs for future acquisitions, when applicable, were generally expected to be under \$100,000.

An average of 82 percent of plants reporting in each of the technology groups foresee equipment cost as the most significant barrier to future acquisitions. The second and third most cited barriers for three of the technology groups (excluding materials handling) are cost of software and cost of training, respectively. Forty-three percent (5,843) of

plants reporting usage of materials handling equipment indicated insufficient benefits as the second most frequent barrier.

Quality improvement was the benefit most frequently cited by plants using design and engineering equipment and fabrication and machining equipment, as reported by

45 percent (18,960) and 47 percent (19,997) of plants, respectively. Seventy percent (29,636) of plants reported that benefits associated with materials handling equipment were not applicable to operations, as did 48 percent (20,300) of plants reporting on benefits associated with inspection and quality control equipment.

Table 1-1. Percentage of Operations Dependent on Technologically Advanced Equipment and Software

Plant characteristic	Design and engineering (A)	Fabrication and machining (B)	Materials handling (C)	Inspection and quality control (D)
Less than 10 percent	8,902	11,258	18,167	13,414
10 percent to 24 percent	3,914	6,313	2,908	6,231
25 percent to 49 percent	3,793	5,822	1,340	3,729
50 percent to 74 percent	5,233	4,611	1,034	3,334
75 percent or more	9,920	4,242	998	3,830
Not applicable	10,198	9,835	17,448	11,389
Not specified	290	170	356	324

Table 1-2. Total Investment in Technologically Advanced Equipment and Software over the Last 3 Years

Plant characteristic	Design and engineering (A)	Fabrication and machining (B)	Materials handling (C)	Inspection and quality control (D)
Less than \$100,000	22,949	16,372	20,229	23,399
\$100,000 to less than \$1 million	6,982	10,723	1,969	4,467
\$1 million to less than \$5 million	1,084	2,988	299	648
\$5 million to less than \$10 million	193	495	61	114
\$10 million or more	138	508	65	82
Not applicable	10,623	10,958	19,073	13,100
Not specified	282	208	555	441

Table 1-3. Average Length of Time from Placement of Order to Full Operation of Technologically Advanced Equipment and Software

Plant characteristic	Design and engineering (A)	Fabrication and machining (B)	Materials handling (C)	Inspection and quality control (D)
Less than 3 months	18,864	15,440	13,189	17,091
3 months to less than 6 months	6,281	7,991	3,005	4,803
6 months to less than 1 year	1,995	3,956	1,123	1,716
1 year to less than 2 years	422	816	268	282
2 years to less than 3 years	120	94	55	107
3 years or more	35	32	71	46
Not applicable	13,984	13,478	23,660	17,430
Not specified	549	444	879	776

Table 1-4. Impact of Technologically Advanced Equipment and Software on Education and Training Costs

Plant characteristic	Design and engineering (A)	Fabrication and machining (B)	Materials handling (C)	Inspection and quality control (D)
Increased significantly	5,640	4,547	1,073	3,106
Increased moderately	8,375	8,235	2,250	5,755
Increased marginally	8,218	8,286	4,350	7,836
No change	5,087	5,682	8,365	7,143
Decreased	253	243	146	405
Not applicable	14,363	15,023	25,559	17,630
Not specified	314	234	508	377

Table 1-5. Cost of Education and Training Related to the Use of Technologically Advanced Equipment and Software over the Last 3 Years

Plant characteristic	Design and engineering (A)	Fabrication and machining (B)	Materials handling (C)	Inspection and quality control (D)
Less than \$10,000	17,152	16,920	13,764	17,654
\$10,000 to less than \$50,000	8,118	6,978	2,050	4,809
\$50,000 to less than \$100,000	1,947	1,995	520	1,391
\$100,000 to less than \$250,000	876	1,042	211	526
\$250,000 to less than \$500,000	277	311	66	171
\$500,000 to less than \$1 million	105	143	21	60
\$1 million to less than \$5 million	60	87	19	43
\$5 million or more	28	31	19	20
Not applicable	13,208	14,209	24,709	16,800
Not specified	480	535	872	778

Table 1-6. Most Significant Problems Encountered over the Last 3 Years in the Acquisition or Use of Technologically Advanced Equipment and Software

Plant characteristic	Design and engineering (A)	Fabrication and machining (B)	Materials handling (C)	Inspection and quality control (D)
Encountered problems	12,030	12,458	6,122	9,125
Overall cost	7,957	8,369	3,850	5,994
Cost of education and training	4,053	3,963	1,454	3,132
Worker resistance	1,543	1,987	872	1,640
Time to develop software	3,538	2,387	1,119	2,059
Cost to develop software	2,275	1,533	1,041	1,474
Increased maintenance expenses	1,522	2,966	663	949
Need for market expansion	1,067	1,595	478	797
Lack of financial justification	3,966	3,943	2,731	3,362
Lack of technical support from vendors	2,509	2,486	909	1,423
Other	1,445	1,282	579	900
Did not encounter problems	29,864	28,989	34,870	32,115
Not specified	357	803	1,260	1,010

Table 1-7. Most Significant Anticipated Barriers to Acquisitions of Technologically Advanced Equipment and Software over the Next 3 Years

Plant characteristic	Design and engineering (A)	Fabrication and machining (B)	Materials handling (C)	Inspection and quality control (D)
Anticipate barriers.....	16,445	19,076	13,487	15,555
Cost of equipment.....	13,340	16,488	10,851	12,519
Cost of software.....	9,003	7,022	5,060	6,816
Cost of education and training.....	5,397	5,840	3,180	5,120
Lack of skilled work force.....	3,165	5,005	1,951	3,087
Lack of benefits.....	4,021	4,963	5,843	4,461
Union contract.....	149	656	333	303
Lack of information on technology.....	946	1,092	936	1,074
Lack of management support.....	1,742	1,813	1,579	1,722
Incompatibility with other equipment.....	1,205	1,371	1,145	868
Lack of product marketability.....	1,042	1,402	686	898
Lack of technical support from vendors.....	839	1,007	669	772
Other.....	1,790	2,378	1,688	1,779
Do not anticipate barriers.....	25,310	22,504	27,580	25,702
Not specified.....	496	671	1,184	994

Table 1-8. Benefits Derived from the Use of Technologically Advanced Equipment and Software

Plant characteristic	Design and engineering (A)	Fabrication and machining (B)	Materials handling (C)	Inspection and quality control (D)
Labor cost reduction.....	14,438	17,126	7,246	9,967
Quality improvement.....	18,960	19,997	4,740	18,162
Flexibility increase.....	11,543	8,053	3,814	5,616
Setup time reductions.....	3,640	7,851	1,424	3,168
Equipment utilization increase.....	2,469	4,154	1,847	2,628
Inventory reduction.....	1,103	2,831	4,715	1,945
Lead time reduction.....	8,589	6,482	3,232	3,499
Marketing advantage.....	7,092	3,713	1,265	5,554
Other.....	879	550	680	804
Not applicable.....	15,063	15,327	29,636	20,300
Not specified.....	773	593	556	1,012

Table 1-9. Percentage of Operations Anticipated to be Dependent on Technologically Advanced Equipment and Software in 3 Years

Plant characteristic	Design and engineering (A)	Fabrication and machining (B)	Materials handling (C)	Inspection and quality control (D)
Less than 10 percent	7,197	8,255	13,034	9,962
10 percent to 24 percent	4,532	6,894	4,555	6,808
25 percent to 49 percent	4,275	6,484	2,224	4,598
50 percent to 74 percent	5,171	5,558	1,574	3,940
75 percent or more	10,542	5,060	1,355	4,371
Not applicable	10,034	9,696	18,760	11,941
Not specified	501	303	749	631

Table 1-10. Plans to Acquire Technologically Advanced Equipment and Software over the Next 3 Years

Plant characteristic	Design and engineering (A)	Fabrication and machining (B)	Materials handling (C)	Inspection and quality control (D)
Total replacement (75 percent or more)	858	390	413	467
Major upgrade (25 percent to less than 75 percent)	6,220	6,561	1,911	5,039
Minor upgrade (less than 25 percent)	10,745	10,408	4,718	8,310
Under consideration, but no firm plans	12,619	13,543	12,236	13,749
Not applicable	11,380	10,972	22,171	14,117
Not specified	430	377	802	569

Table 1-11. Anticipated Cost to Acquire Technologically Advanced Equipment and Software over the Next 3 Years

Plant characteristic	Design and engineering (A)	Fabrication and machining (B)	Materials handling (C)	Inspection and quality control (D)
Less than \$100,000	21,664	13,607	14,881	19,776
\$100,000 to less than \$1 million	6,278	12,393	2,800	5,341
\$1 million to less than \$5 million	668	2,716	360	579
\$5 million to less than \$10 million	106	453	47	101
\$10 million or more	76	323	41	55
Not applicable	13,014	12,426	23,207	15,748
Not specified	444	333	915	651

Chapter 2. Design and Engineering

Design and Engineering includes the following technologies:

- Computer-aided design (CAD) and/or computer-aided engineering (CAE)
- CAD output used to control manufacturing machines (CAD/Computer-Aided Manufacturing (CAM))
- Digital representation of CAD output used in procurement activities

Usage of design and engineering equipment appeared highest for plants classified in SIC major groups 35 (Industrial Machinery and Equipment), 36 (Electronic and Other Electric Equipment), and 38 (Instruments and Related Products), with an average of 27 percent of plants using this equipment in 75 percent or more of operations. Design and engineering equipment was used least in SIC major groups 34 (Fabricated Metal Products) and 37 (Transportation Equipment) with 57 percent (7,628) and 51 percent (2,051), respectively, reporting that this equipment was not applicable to operations or was used in less than 10 percent of operations. The percentage of plant operations dependent on this type of equipment is expected to increase slightly over the next 3 years. The percentage of plants using this type of equipment in less than 10 percent of operations is expected to decrease by 4 percent, while usage reported in three of the remaining four categories (10 to 24 percent, 25 to 49 percent, and 75 percent or more) is expected to increase by 1 to 2 percent. The percentage of plants indicating usage in 50 to 74 percent of operations is expected to remain unchanged.

Fifty-four percent (22,949) of plants indicated total investments (excluding education and training) in design and engineering equipment to be less than \$100,000 over the past 3 years. Plants with less than 500 employees or having value of shipments under \$10 million tended to invest less than \$100,000, compared with those having 500 or more employees or shipments of \$10 million or more, who were more likely to invest \$100,000 to \$1 million.

Forty-five percent (18,864) of plants indicated the average length of time to install design and engineering

equipment and have it fully operational to be less than 3 months. Plants with 500 or more employees or having shipments of \$50 million or more tended to take longer, usually 3 to 6 months.

The majority of plants indicated that costs for education and training associated with design and engineering usage were not applicable to their operations. Of plants reporting such costs, however, 41 percent (17,152) indicated expenditures to be less than \$10,000 over the past 3 years. Plants with 500 or more employees or having value of shipments of \$25 million or more reported costs slightly higher, ranging from \$10,000 to \$50,000.

Overall cost was the problem most often cited in the acquisition or use of design and engineering equipment, as reported by 66 percent (7,957) of the plants. Education and training costs and lack of financial justification were the second and third most commonly reported problems, respectively. The percentage of plants reporting overall cost as a problem increased with an increase in the age of the plant, with an increase in employment size, and with an increase in plant value of shipments.

The majority of plants in each of the five industries have no firm plans to acquire design and engineering equipment over the next 3 years. Plants with 100 or more employees or having shipments of \$10 million or more anticipate minor upgrades.

For those plants anticipating acquisitions, the majority expect costs to remain under \$100,000. Plants with 500 or more employees or shipments of \$50 million or more expect slightly higher costs, between \$100,000 and \$1 million. Barriers to future acquisitions include equipment cost, followed by software cost, and education and training costs.

The most commonly reported benefit derived from using design and engineering equipment for each of the industries was a reduction in labor cost, followed by improved quality and increased flexibility. The percentage of plants deriving these benefits increased with an increase in employment size and, with the exception of "increased flexibility," increased as the plants' value of shipments increased.

Table 2-1. Percentage of Operations Dependent on Technologically Advanced Design and Engineering Equipment and Software by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	3,382	995	1,040	1,266	2,327	4,246	97
35, Industrial Machinery and Equipment	14,037	2,673	1,418	1,390	1,939	3,845	2,693	78
36, Electronic and Other Electric Equipment	7,004	1,290	728	653	1,037	1,966	1,287	44
37, Transportation Equipment	4,003	842	360	281	444	839	1,209	30
38, Instruments and Related Products	3,854	716	414	429	548	943	763	41
Age of plant:								
Less than 5 years	6,005	1,212	482	540	727	1,673	1,337	34
5 years to 14 years	13,803	2,803	1,317	1,142	1,700	3,316	3,438	86
15 years to 29 years	12,685	2,597	1,206	1,143	1,734	2,941	2,960	105
30 years or more	9,424	2,278	906	923	1,068	1,975	2,209	66
Not specified	334	12	4	46	4	15	254	-
Number of employees:								
Less than 20	4,955	1,168	352	255	273	516	2,343	49
20 to 99	24,899	5,852	2,038	2,136	2,765	5,407	6,531	170
100 to 499	10,144	1,696	1,283	1,086	1,767	3,117	1,134	61
500 to 999	1,252	96	152	182	253	508	55	6
1,000 or more	801	61	82	108	167	363	17	3
Not specified	199	29	7	27	9	10	117	1
Unionized plants:								
Yes	7,842	1,918	784	795	1,051	1,654	1,604	36
Contract in effect:								
Yes	7,587	1,838	776	774	1,030	1,600	1,532	36
No	256	80	8	21	20	54	72	-
No	34,244	6,943	3,118	2,973	4,180	8,263	8,514	253
Not specified	165	41	12	25	3	3	80	1
Percentage of products exported:								
None	12,099	2,763	993	757	896	1,803	4,802	84
Less than 10 percent	19,125	4,262	1,783	1,899	2,427	4,557	4,063	134
10 percent to 19 percent	5,653	1,073	567	644	968	1,662	711	28
20 percent to 49 percent	3,925	557	436	387	739	1,390	384	32
50 percent or more	967	128	84	84	185	421	64	-
Not specified	481	119	50	21	18	86	174	13
Value of goods and services:								
Less than \$750,000	2,078	377	132	155	152	146	1,088	28
\$750,000 to less than \$1 million	1,917	535	121	99	45	280	828	9
\$1 million to less than \$5 million	17,806	4,621	1,550	1,353	1,668	3,172	5,324	118
\$5 million to less than \$10 million	7,853	1,524	750	704	1,130	2,236	1,443	66
\$10 million to less than \$25 million	6,464	1,077	652	762	1,151	1,997	784	42
\$25 million to less than \$50 million	2,827	414	358	329	520	957	232	16
\$50 million to less than \$100 million	1,467	156	175	184	273	541	134	4
\$100 million or more	1,283	118	143	155	261	553	47	5
Not specified	556	80	33	52	33	38	318	1
Products made to military specifications:								
Yes	16,650	3,637	1,428	1,546	2,271	4,224	3,440	104
No	22,010	4,676	2,156	1,952	2,634	4,833	5,597	162
Don't know	3,350	549	312	277	323	844	1,023	24
Not specified	241	40	18	19	6	19	139	-

See footnotes at end of table.

Table 2-1. Percentage of Operations Dependent on Technologically Advanced Design and Engineering Equipment and Software by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped	11,107	2,081	1,150	1,086	1,727	3,095	1,880	88
1 percent to 24 percent.....	8,950	1,773	932	844	1,351	2,519	1,457	73
25 percent to 74 percent.....	1,285	178	139	153	272	335	193	15
75 percent or more.....	578	90	76	59	66	165	123	-
Don't know.....	294	40	4	30	37	75	108	-
No	29,173	6,516	2,581	2,529	3,260	6,432	7,653	200
Don't know.....	1,801	294	167	160	244	386	548	2
Not specified	170	11	15	18	3	6	117	-
Subcontractor to defense agencies:								
Yes: Percent of products shipped	16,971	3,352	1,618	1,666	2,525	4,613	3,097	100
1 percent to 24 percent.....	11,232	2,248	1,119	1,135	1,590	3,071	2,013	56
25 percent to 74 percent.....	3,220	623	300	283	557	899	520	38
75 percent or more.....	1,295	236	121	120	236	384	194	4
Don't know.....	1,223	245	78	128	142	259	369	1
No	14,929	3,311	1,332	1,248	1,553	3,072	4,284	128
Don't know.....	10,057	2,196	953	862	1,150	2,204	2,630	62
Not specified	294	42	10	18	6	32	187	-
Foreign owned ¹ :								
Yes.....	3,349	545	366	358	500	987	576	17
No	37,340	8,120	3,391	3,276	4,515	8,538	9,249	250
Don't know.....	1,142	155	122	130	198	348	186	3
Not specified	420	81	35	29	20	46	187	21

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 2-2. Total Investment in Technologically Advanced Design and Engineering Equipment and Software over the Last 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	7,320	1,342	85	35	7	4,446	118
35, Industrial Machinery and Equipment	14,037	8,253	2,594	336	34	26	2,755	39
36, Electronic and Other Electric Equipment	7,004	3,583	1,611	329	48	38	1,337	57
37, Transportation Equipment	4,003	1,835	652	105	31	39	1,298	43
38, Instruments and Related Products	3,854	1,958	784	229	46	26	786	25
Age of plant:								
Less than 5 years	6,005	3,291	1,146	175	39	21	1,296	36
5 years to 14 years	13,803	7,788	1,983	270	54	20	3,586	103
15 years to 29 years	12,685	6,882	2,125	359	35	41	3,167	75
30 years or more	9,424	4,894	1,727	274	64	55	2,354	57
Not specified	334	95	1	6	1	1	219	10
Number of employees:								
Less than 20	4,955	2,280	169	2	-	-	2,451	54
20 to 99	24,899	14,990	2,737	197	30	2	6,785	158
100 to 499	10,144	5,206	3,211	418	38	17	1,201	52
500 to 999	1,252	300	584	226	48	22	65	7
1,000 or more	801	96	266	237	76	97	22	7
Not specified	199	78	15	5	-	-	99	2
Unionized plants:								
Yes	7,842	4,155	1,477	284	64	58	1,747	57
Contract in effect:								
Yes	7,587	4,015	1,443	279	63	58	1,671	57
No	256	140	34	5	1	-	76	-
No	34,244	18,717	5,494	799	129	79	8,805	221
Not specified	165	77	12	1	-	-	72	3
Percentage of products exported:								
None	12,099	6,121	873	68	16	13	4,863	147
Less than 10 percent	19,125	11,052	3,046	424	71	42	4,395	94
10 percent to 19 percent	5,653	3,132	1,447	246	30	20	745	34
20 percent to 49 percent	3,925	1,961	1,206	240	57	49	410	3
50 percent or more	967	397	373	98	17	12	69	1
Not specified	481	287	38	7	3	2	141	2
Value of goods and services:								
Less than \$750,000	2,078	820	112	1	-	-	1,133	12
\$750,000 to less than \$1 million	1,917	1,038	45	-	-	-	798	37
\$1 million to less than \$5 million	17,806	10,670	1,316	98	27	-	5,590	105
\$5 million to less than \$10 million	7,853	4,800	1,371	91	4	2	1,512	73
\$10 million to less than \$25 million	6,464	3,585	1,816	172	23	-	841	28
\$25 million to less than \$50 million	2,827	1,184	1,199	175	12	6	240	10
\$50 million to less than \$100 million	1,467	439	637	197	28	21	143	2
\$100 million or more	1,283	210	468	337	99	104	54	10
Not specified	556	203	18	12	-	4	313	6
Products made to military specifications:								
Yes	16,650	9,319	2,896	522	92	76	3,677	68
No	22,010	11,915	3,578	485	90	53	5,705	183
Don't know	3,350	1,618	499	73	12	8	1,112	29
Not specified	241	96	10	3	-	-	130	2

See footnotes at end of table.

Table 2-2. Total Investment in Technologically Advanced Design and Engineering Equipment and Software over the Last 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped	11,107	6,259	2,269	423	73	76	1,956	50
1 percent to 24 percent	8,950	5,234	1,813	280	39	36	1,522	26
25 percent to 74 percent	1,285	646	316	64	16	16	205	22
75 percent or more	578	252	101	67	16	23	118	3
Don't know	294	126	39	13	2	2	112	0
No.	29,173	15,872	4,388	595	110	56	7,926	226
Don't know	1,801	767	319	65	10	5	632	2
Not specified	170	51	6	1	-	-	109	2
Subcontractor to defense agencies:								
Yes: Percent of products shipped	16,971	9,625	3,286	543	89	82	3,285	61
1 percent to 24 percent	11,232	6,618	1,999	350	54	50	2,138	24
25 percent to 74 percent	3,220	1,767	689	133	19	15	560	37
75 percent or more	1,295	668	334	30	9	11	242	-
Don't know	1,223	572	264	30	7	5	344	-
No.	14,929	7,754	2,142	321	75	35	4,465	136
Don't know	10,057	5,472	1,546	215	29	19	2,694	82
Not specified	294	99	8	5	-	1	179	2
Foreign owned ¹ :								
Yes	3,349	1,635	847	189	31	21	624	3
No.	37,340	20,604	5,798	800	137	110	9,617	273
Don't know	1,142	550	277	84	23	6	199	3
Not specified	420	160	60	11	2	1	183	2

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 2-3. Average Length of Time from Placement of Order to Full Operation of Technologically Advanced Design and Engineering Equipment and Software by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than 3 months (B)	3 months to less than 6 months (C)	6 months to less than 1 year (D)	1 year to less than 2 years (E)	2 years to less than 3 years (F)	3 years or more (G)	Not applicable (H)	Not specified (I)
Major Group:									
34, Fabricated Metal Products	13,353	5,800	1,358	473	88	21	3	5,446	163
35, Industrial Machinery and Equipment	14,037	6,995	2,120	575	108	60	4	3,988	188
36, Electronic and Other Electric Equipment	7,004	3,032	1,404	443	103	11	21	1,894	95
37, Transportation Equipment	4,003	1,452	653	259	48	12	1	1,529	49
38, Instruments and Related Products	3,854	1,585	747	245	76	16	5	1,127	55
Age of plant:									
Less than 5 years	6,005	2,931	842	252	39	9	0	1,875	57
5 years to 14 years	13,803	6,491	1,891	531	108	51	1	4,562	169
15 years to 29 years	12,685	5,626	1,936	601	115	35	2	4,165	204
30 years or more	9,424	3,747	1,604	600	159	26	32	3,143	114
Not specified	334	69	9	12	1	-	-	238	5
Number of employees:									
Less than 20	4,955	1,673	236	91	13	23	1	2,827	92
20 to 99	24,899	12,246	2,572	710	142	50	14	8,843	323
100 to 499	10,144	4,371	2,637	786	158	31	5	2,045	110
500 to 999	1,252	358	496	193	60	7	4	115	18
1,000 or more	801	159	325	199	50	8	8	45	6
Not specified	199	57	15	15	-	-	3	110	-
Unionized plants:									
Yes	7,842	2,988	1,536	494	132	28	23	2,571	72
Contract in effect:									
Yes	7,587	2,883	1,511	458	132	28	23	2,485	67
No	256	105	25	36	-	-	-	86	4
No	34,244	15,829	4,739	1,491	291	92	12	11,313	476
Not specified	165	47	6	10	-	-	-	100	1
Percentage of products exported:									
None	12,099	4,809	865	329	64	32	3	5,790	207
Less than 10 percent	19,125	8,928	2,864	898	195	53	21	5,923	243
10 percent to 19 percent	5,653	2,752	1,175	334	53	23	4	1,239	73
20 percent to 49 percent	3,925	1,768	1,006	367	76	1	4	686	18
50 percent or more	967	432	271	58	28	10	-	160	8
Not specified	481	177	99	8	6	1	3	187	-
Value of goods and services:									
Less than \$750,000	2,078	615	127	1	1	-	-	1,275	59
\$750,000 to less than \$1 million	1,917	775	107	27	7	-	15	903	84
\$1 million to less than \$5 million	17,806	8,512	1,419	478	116	40	-	7,078	163
\$5 million to less than \$10 million	7,853	3,960	1,181	313	40	30	4	2,202	123
\$10 million to less than \$25 million	6,464	3,048	1,506	332	98	22	1	1,390	67
\$25 million to less than \$50 million	2,827	1,024	924	360	37	11	-	445	25
\$50 million to less than \$100 million	1,467	474	495	201	46	6	4	230	10
\$100 million or more	1,283	330	485	265	73	10	8	103	9
Not specified	556	126	38	18	5	-	3	358	8
Products made to military specifications:									
Yes	16,650	7,838	2,660	872	149	50	24	4,862	197
No	22,010	9,624	3,213	991	237	57	10	7,567	310
Don't know	3,350	1,339	381	118	37	13	1	1,420	42
Not specified	241	64	27	15	-	-	-	135	-

See footnotes at end of table.

Table 2-3. Average Length of Time from Placement of Order to Full Operation of Technologically Advanced Design and Engineering Equipment and Software, by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than 3 months (B)	3 months to less than 6 months (C)	6 months to less than 1 year (D)	1 year to less than 2 years (E)	2 years to less than 3 years (F)	3 years or more (G)	Not applicable (H)	Not specified (I)
Prime contractor to defense agencies:									
Yes: Percent of products shipped	11,107	5,214	2,181	718	121	53	10	2,699	112
1 percent to 24 percent	8,950	4,439	1,679	536	77	46	7	2,088	79
25 percent to 74 percent	1,285	519	311	111	14	3	1	296	30
75 percent or more	578	153	141	58	28	4	2	190	3
Don't know	294	103	51	13	2	-	-	125	-
No	29,173	13,004	3,873	1,201	275	67	22	10,356	375
Don't know	1,801	608	211	74	26	-	3	817	62
Not specified	170	39	16	2	-	-	-	112	-
Subcontractor to defense agencies:									
Yes: Percent of products shipped	16,971	8,562	2,703	884	160	47	20	4,373	222
1 percent to 24 percent	11,232	5,833	1,730	589	93	12	16	2,836	123
25 percent to 74 percent	3,220	1,584	600	176	40	31	-	725	66
75 percent or more	1,295	651	237	77	20	4	3	302	1
Don't know	1,223	494	137	42	7	-	1	510	32
No	14,929	6,168	2,105	659	129	63	3	5,620	181
Don't know	10,057	4,083	1,469	445	132	10	12	3,759	146
Not specified	294	51	4	6	1	-	-	233	-
Foreign owned ¹ :									
Yes	3,349	1,365	758	243	51	10	3	873	46
No	37,340	16,916	5,225	1,638	328	105	31	12,614	484
Don't know	1,142	470	268	94	39	1	1	267	1
Not specified	420	113	30	20	4	3	-	231	18

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 2-4. Impact of Technologically Advanced Design and Engineering Equipment and Software on Education and Training Costs by Plant Characteristic

Plant characteristic	Number of plants (A)	Increased significantly (B)	Increased moderately (C)	Increased marginally (D)	No change (E)	Decreased (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	1,408	2,079	2,620	1,434	79	5,630	103
35, Industrial Machinery and Equipment	14,037	2,140	3,259	2,655	1,762	47	4,081	92
36, Electronic and Other Electric Equipment	7,004	1,119	1,455	1,381	1,022	77	1,910	40
37, Transportation Equipment	4,003	469	725	725	424	12	1,595	53
38, Instruments and Related Products	3,854	504	857	836	445	39	1,146	27
Age of plant:								
Less than 5 years	6,005	864	1,189	1,096	788	26	2,005	36
5 years to 14 years	13,803	1,752	2,770	2,581	1,905	148	4,575	72
15 years to 29 years	12,685	1,647	2,601	2,672	1,350	48	4,242	126
30 years or more	9,424	1,371	1,794	1,835	1,016	32	3,307	71
Not specified	334	7	21	34	28	-	235	9
Number of employees:								
Less than 20	4,955	322	468	350	720	16	3,014	65
20 to 99	24,899	2,983	4,442	4,692	3,111	158	9,336	177
100 to 499	10,144	1,803	2,681	2,609	1,115	72	1,806	57
500 to 999	1,252	288	458	340	74	5	81	8
1,000 or more	801	240	305	187	41	2	19	6
Not specified	199	4	21	40	27	-	107	-
Unionized plants:								
Yes	7,842	1,144	1,627	1,632	767	34	2,601	37
Contract in effect:								
Yes	7,587	1,099	1,606	1,594	729	34	2,487	37
No	256	45	21	38	37	-	114	-
No	34,244	4,494	6,737	6,523	4,321	219	11,675	276
Not specified	165	2	11	63	-	-	87	1
Percentage of products exported:								
None	12,099	1,171	1,689	1,524	1,457	56	6,102	100
Less than 10 percent	19,125	2,551	3,935	4,060	2,207	154	6,038	180
10 percent to 19 percent	5,653	1,040	1,223	1,336	742	30	1,264	17
20 percent to 49 percent	3,925	657	1,167	958	520	13	604	6
50 percent or more	967	196	289	242	99	-	142	-
Not specified	481	26	73	97	62	-	212	12
Value of goods and services:								
Less than \$750,000	2,078	102	152	161	226	-	1,403	32
\$750,000 to less than \$1 million	1,917	140	178	140	311	15	1,098	35
\$1 million to less than \$5 million	17,806	1,984	2,909	2,784	2,427	101	7,473	128
\$5 million to less than \$10 million	7,853	1,116	1,655	1,879	979	59	2,109	56
\$10 million to less than \$25 million	6,464	1,134	1,580	1,762	649	26	1,280	34
\$25 million to less than \$50 million	2,827	508	887	754	251	32	380	14
\$50 million to less than \$100 million	1,467	284	489	372	121	11	186	5
\$100 million or more	1,283	346	468	303	87	1	69	9
Not specified	556	25	56	62	38	8	364	2
Products made to military specifications:								
Yes	16,650	2,496	3,543	3,501	1,803	111	5,082	115
No	22,010	2,701	4,181	4,120	2,877	131	7,824	175
Don't know	3,350	435	640	561	374	12	1,305	24
Not specified	241	9	10	37	33	-	152	-

See footnotes at end of table.

Table 2-4. Impact of Technologically Advanced Design and Engineering Equipment and Software on Education and Training Costs by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Increased significantly (B)	Increased moderately (C)	Increased marginally (D)	No change (E)	Decreased (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped	11,107	1,760	2,589	2,577	1,165	73	2,879	64
1 percent to 24 percent	8,950	1,365	2,097	2,164	984	47	2,247	47
25 percent to 74 percent	1,285	245	317	261	112	12	325	14
75 percent or more	578	94	142	100	46	7	187	3
Don't know	294	55	34	53	24	8	120	-
No	29,173	3,696	5,473	5,286	3,683	166	10,653	216
Don't know	1,801	175	306	333	222	14	716	35
Not specified	170	9	7	23	17	-	115	-
Subcontractor to defense agencies:								
Yes: Percent of products shipped	16,971	2,556	3,861	3,649	2,010	172	4,630	93
1 percent to 24 percent	11,232	1,694	2,537	2,517	1,317	110	3,005	53
25 percent to 74 percent	3,220	456	808	678	397	14	843	24
75 percent or more	1,295	265	304	225	142	44	310	4
Don't know	1,223	140	212	230	154	4	471	11
No	14,929	1,882	2,563	2,597	1,784	57	5,925	120
Don't know	10,057	1,186	1,927	1,929	1,275	24	3,615	101
Not specified	294	16	24	43	18	-	194	-
Foreign owned¹:								
Yes	3,349	542	814	737	357	16	860	22
No	37,340	4,893	7,213	7,200	4,508	224	13,036	266
Don't know	1,142	175	295	240	162	8	257	4
Not specified	420	30	52	40	60	6	209	22

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 2-5. Cost of Education and Training Related to the Use of Technologically Advanced Design and Engineering Equipment and Software over the Last 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than \$10,000 (B)	\$10,000 to less than \$50,000 (C)	\$50,000 to less than \$100,000 (D)	\$100,000 to less than \$250,000 (E)	\$250,000 to less than \$500,000 (F)	\$500,000 to less than \$1 million (G)	\$1 million to less than \$5 million (H)	\$5 million and over (I)	Not applicable (J)	Not specified (K)
Major Group:											
34, Fabricated Metal Products.....	13,353	5,421	2,017	284	125	21	1	2	7	5,299	175
35, Industrial Machinery and Equipment.....	14,037	6,260	2,919	733	279	82	21	9	4	3,594	135
36, Electronic and Other Electric Equipment.....	7,004	2,763	1,571	476	227	92	35	19	5	1,764	51
37, Transportation Equipment.....	4,003	1,385	654	216	120	30	25	18	7	1,491	58
38, Instruments and Related Products.....	3,854	1,322	957	238	125	53	22	11	4	1,059	62
Age of plant:											
Less than 5 years.....	6,005	2,335	1,385	274	134	32	5	6	7	1,765	62
5 years to 14 years.....	13,803	6,165	2,453	495	177	99	34	7	2	4,236	134
15 years to 29 years.....	12,685	4,975	2,462	664	266	66	28	13	8	4,020	182
30 years or more.....	9,424	3,613	1,798	510	291	78	38	34	9	2,965	87
Not specified.....	334	63	20	3	7	1	-	-	1	223	14
Number of employees:											
Less than 20.....	4,955	1,615	353	37	14	-	-	-	7	2,808	122
20 to 99.....	24,899	11,006	4,153	614	202	57	3	-	-	8,600	264
100 to 499.....	10,144	4,111	2,995	920	341	90	13	5	-	1,604	65
500 to 999.....	1,252	272	443	220	142	56	26	8	-	70	15
1,000 or more.....	801	89	167	154	162	74	63	47	21	18	5
Not specified.....	199	58	6	3	15	-	-	-	-	107	10
Unionized plants:											
Yes.....	7,842	3,078	1,564	456	262	83	40	30	9	2,243	77
Contract in effect:											
Yes.....	7,587	2,990	1,529	446	255	82	39	28	9	2,131	77
No.....	256	88	35	10	6	1	1	2	-	112	0
No.....	34,244	14,018	6,544	1,487	600	194	65	30	19	10,887	401
Not specified.....	165	56	11	4	15	-	-	-	-	78	1
Percentage of products exported:											
None.....	12,099	4,526	1,354	172	77	41	6	6	3	5,709	205
Less than 10 percent....	19,125	8,308	3,778	816	381	77	30	19	10	5,514	191
10 percent to 19 percent.....	5,653	2,323	1,560	388	153	52	23	11	5	1,090	48
20 percent to 49 percent.....	3,925	1,474	1,094	405	189	67	33	20	6	620	17
50 percent or more.....	967	313	298	130	65	37	13	3	3	102	3
Not specified.....	481	208	34	35	10	2	-	1	-	174	17
Value of goods and services:											
Less than \$750,000.....	2,078	703	66	8	17	-	1	-	-	1,246	37
\$750,000 to less than \$1 million.....	1,917	696	118	15	1	3	-	-	-	1,015	69
\$1 million to less than \$5 million.....	17,806	7,523	2,709	371	91	18	-	-	7	6,888	199
\$5 million to less than \$10 million.....	7,853	3,716	1,550	267	119	50	-	-	-	2,081	71
\$10 million to less than \$25 million.....	6,464	2,811	1,861	495	139	29	12	-	-	1,078	39
\$25 million to less than \$50 million.....	2,827	955	984	347	160	17	-	7	-	331	25
\$50 million to less than \$100 million.....	1,467	397	495	181	128	58	17	2	-	173	16
\$100 million or more.....	1,283	213	305	243	212	101	74	51	20	54	10
Not specified.....	556	137	31	20	8	1	1	-	1	342	15

See footnotes at end of table.

Table 2-5. Cost of Education and Training Related to the Use of Technologically Advanced Design and Engineering Equipment and Software over the Last 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than \$10,000 (B)	\$10,000 to less than \$50,000 (C)	\$50,000 to less than \$100,000 (D)	\$100,000 to less than \$250,000 (E)	\$250,000 to less than \$500,000 (F)	\$500,000 to less than \$1 million (G)	\$1 million to less than \$5 million (H)	\$5 million and over (I)	Not applicable (J)	Not specified (K)
Products made to military specifications:											
Yes	16,650	6,787	3,462	928	394	136	59	45	12	4,649	177
No	22,010	9,060	3,960	924	435	128	40	14	16	7,166	267
Don't know	3,350	1,235	675	92	39	13	6	1	-	1,255	33
Not specified	241	69	21	3	7	-	-	-	-	137	2
Prime contractor to defense agencies:											
Yes: Percent of products shipped	11,107	4,676	2,571	714	334	123	53	46	11	2,440	138
1 percent to											
24 percent	8,950	4,009	2,020	544	233	76	25	24	3	1,929	86
25 percent to											
74 percent	1,285	434	351	118	50	26	12	11	2	236	43
75 percent or more ...	578	151	137	44	43	18	14	9	4	151	9
Don't know	294	82	64	8	8	3	2	1	2	124	-
No	29,173	11,837	5,220	1,148	492	140	45	14	8	9,938	330
Don't know	1,801	600	320	81	43	15	7	-	8	716	11
Not specified	170	38	6	3	6	-	-	-	-	115	1
Subcontractor to defense agencies:											
Yes: Percent of products shipped	16,971	7,295	3,682	988	413	129	57	43	13	4,207	145
1 percent to											
24 percent	11,232	4,856	2,432	642	275	87	38	26	7	2,785	83
25 percent to											
74 percent	3,220	1,443	722	159	106	31	15	6	4	682	52
75 percent or more ...	1,295	535	295	145	17	5	3	6	1	286	1
Don't know	1,223	460	233	41	15	5	1	4	1	453	9
No	14,929	5,749	2,446	566	296	116	33	15	4	5,468	236
Don't know	10,057	4,046	1,968	378	160	31	15	2	10	3,349	98
Not specified	294	62	22	16	7	1	-	-	-	185	1
Foreign owned ¹ :											
Yes	3,349	1,360	823	221	125	37	14	3	1	750	16
No	37,340	15,234	6,992	1,578	675	224	86	52	26	12,024	449
Don't know	1,142	409	277	120	65	14	5	4	1	233	13
Not specified	420	148	26	28	12	2	-	1	-	201	1

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 2-6. Most Significant Problems Encountered over the Last 3 Years in the Acquisition or Use of Technologically Advanced Design and Engineering Equipment and Software by Plant Characteristic

Plant characteristic	Overall cost (A)	Cost of education and training (B)	Worker resistance (C)	Time to develop software (D)	Cost to develop software (E)	Increased maintenance expenses (F)	Need for market expansion (G)	Lack of financial justification (H)	Lack of technical support from vendors (I)	Other (J)
Major Group:										
34, Fabricated Metal Products	2,068	1,022	475	928	630	340	303	1,055	592	405
35, Industrial Machinery and Equipment.....	2,910	1,536	578	1,108	825	574	451	1,579	992	520
36, Electronic and Other Electric Equipment.....	1,456	627	201	798	460	300	172	550	445	267
37, Transportation Equipment..	723	457	154	357	149	148	72	413	268	112
38, Instruments and Related Products	800	411	135	347	210	160	70	369	211	143
Age of plant:										
Less than 5 years	1,000	543	145	485	255	150	104	469	329	309
5 years to 14 years	2,513	1,187	519	1,080	682	429	342	1,085	777	333
15 years to 29 years	2,356	1,328	488	1,138	642	461	317	1,303	829	505
30 years or more	2,070	977	380	829	690	483	303	1,106	552	296
Not specified.....	19	17	11	6	6	-	1	3	22	4
Number of employees:										
Less than 20.....	574	261	72	190	163	41	65	297	152	85
20 to 99.....	4,112	2,165	815	1,735	1,137	763	653	2,006	1,376	716
100 to 499.....	2,532	1,272	512	1,189	727	488	280	1,242	763	474
500 to 999.....	375	174	77	206	123	120	28	228	111	86
1,000 or more.....	336	158	62	199	117	103	40	182	97	76
Not specified.....	28	22	6	19	8	6	-	11	11	8
Unionized plants:										
Yes.....	1,581	838	345	736	530	312	183	893	491	328
Contract in effect:										
Yes.....	1,564	829	333	700	524	309	183	876	489	324
No.....	17	9	12	36	6	3	-	17	2	5
No.....	6,333	3,185	1,197	2,778	1,729	1,208	885	3,060	2,012	1,112
Not specified.....	43	30	1	25	15	1	-	13	6	5
Percentage of products exported:										
None.....	1,523	772	331	542	347	232	210	864	501	442
Less than 10 percent	3,965	2,106	747	1,682	1,027	742	550	1,947	1,239	595
10 percent to 19 percent	1,190	500	250	582	441	266	196	648	369	152
20 percent to 49 percent	867	484	157	559	370	203	81	358	297	135
50 percent or more	298	144	55	153	74	58	21	78	83	81
Not specified.....	116	46	4	20	15	21	9	70	20	38
Value of goods and services:										
Less than \$750,000.....	179	60	2	32	39	36	7	85	32	10
\$750,000 to less than \$1 million.....	311	144	61	69	66	30	45	186	28	49
\$1 million to less than \$5 million.....	2,862	1,455	545	1,200	741	426	473	1,429	927	406
\$5 million to less than \$10 million.....	1,351	725	289	667	500	218	200	614	460	269
\$10 million to less than \$25 million.....	1,637	779	232	724	394	374	195	680	554	379
\$25 million to less than \$50 million.....	710	414	247	326	212	147	68	461	198	130
\$50 million to less than \$100 million.....	402	209	72	233	138	127	29	220	146	83
\$100 million or more.....	457	218	86	272	163	157	50	267	140	106
Not specified.....	48	50	9	16	21	6	1	24	23	14
Products made to military specifications:										
Yes.....	3,648	1,729	726	1,533	1,102	627	510	1,796	981	709
No.....	3,833	2,018	685	1,772	1,030	737	463	1,962	1,314	636
Don't know	462	298	131	226	130	157	95	191	208	88
Not specified.....	15	9	1	6	13	-	-	15	6	11

See footnotes at end of table.

Table 2-6. **Most Significant Problems Encountered over the Last 3 Years in the Acquisition or Use of Technologically Advanced Design and Engineering Equipment and Software by Plant Characteristic—Continued**

Plant characteristic	Overall cost (A)	Cost of education and training (B)	Worker resistance (C)	Time to develop software (D)	Cost to develop software (E)	Increased maintenance expenses (F)	Need for market expansion (G)	Lack of financial justification (H)	Lack of technical support from vendors (I)	Other (J)
Prime contractor to defense agencies:										
Yes: Percent of products shipped	2,406	1,246	483	1,116	778	481	279	1,188	871	450
1 percent to 24 percent	1,903	938	369	873	633	338	225	945	728	384
25 percent to 74 percent	281	215	67	147	82	79	32	159	76	26
75 percent or more	145	62	37	69	41	36	16	63	42	26
Don't know	76	31	10	27	21	27	6	22	25	13
No	5,286	2,648	1,013	2,294	1,397	979	763	2,654	1,551	953
Don't know	256	154	47	121	89	62	26	112	79	38
Not specified	10	5	1	6	12	-	-	11	8	4
Subcontractor to defense agencies:										
Yes: Percent of products shipped	3,898	1,843	728	1,631	1,117	725	506	1,827	1,204	707
1 percent to 24 percent	2,637	1,212	541	1,152	756	411	342	1,138	802	493
25 percent to 74 percent	776	390	143	248	189	203	105	435	322	134
75 percent or more	304	122	20	133	129	82	37	134	39	59
Don't know	180	118	23	98	43	29	22	121	40	20
No	2,263	1,286	469	1,114	613	403	302	1,110	786	426
Don't know	1,758	907	337	772	538	394	259	1,022	494	309
Not specified	38	17	9	21	6	1	-	7	26	4
Foreign owned ¹ :										
Yes	767	386	100	356	265	134	89	440	241	162
No	6,796	3,461	1,356	3,039	1,912	1,301	949	3,298	2,144	1,256
Don't know	310	128	64	116	79	68	29	188	64	23
Not specified	84	79	23	26	18	19	-	40	59	5

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 2-7. Most Significant Anticipated Barriers to Acquisitions of Technologically Advanced Design and Engineering Equipment and Software over the Next 3 Years by Plant Characteristic

Plant characteristic	Cost of equipment (A)	Cost of software (B)	Cost of education and training (C)	Lack of skilled work force (D)	Lack of benefits (E)	Union contract (F)	Lack of technological information (G)	Lack of management support (H)	Incompatibility with other equipment (I)	Lack of product marketability (J)	Lack of technical support from vendors (K)	Other (L)
Major Group:												
34, Fabricated Metal Products	3,977	2,733	1,530	932	1,389	75	380	432	280	403	258	374
35, Industrial Machinery and Equipment.....	4,555	3,118	1,954	1,373	1,171	37	206	517	403	297	266	746
36, Electronic and Other Electric Equipment	2,302	1,501	943	384	650	19	199	330	254	148	157	320
37, Transportation Equipment.....	1,344	834	513	314	495	14	100	276	118	126	109	186
38, Instruments and Related Products.....	1,162	818	457	162	316	4	61	187	150	68	50	165
Age of plant:												
Less than 5 years	1,812	1,257	751	267	369	3	160	159	187	82	124	202
5 years to 14 years.....	4,397	3,168	1,769	1,114	1,216	50	251	476	350	401	290	484
15 years to 29 years.....	3,869	2,427	1,519	1,003	1,377	39	330	576	352	377	279	594
30 years or more.....	3,206	2,115	1,333	775	1,044	58	205	521	312	180	137	511
Not specified	56	35	26	6	15	-	-	10	5	2	9	1
Number of employees:												
Less than 20	1,231	802	466	368	425	15	34	90	97	108	40	185
20 to 99	7,834	5,392	3,278	1,876	2,240	61	585	825	494	675	556	1,019
100 to 499	3,396	2,229	1,296	747	1,068	56	278	645	435	202	176	412
500 to 999	487	330	217	93	159	8	30	111	95	23	36	86
1,000 or more.....	340	225	120	64	124	8	17	61	79	34	27	81
Not specified	51	25	20	17	5	1	1	11	6	-	5	8
Unionized plants:												
Yes.....	2,745	1,680	1,051	604	971	149	239	554	254	243	130	382
Contract in effect:												
Yes.....	2,639	1,644	960	595	954	144	209	546	226	243	130	346
No.....	106	35	91	8	16	6	31	8	28	-	-	36
No.....	10,565	7,283	4,342	2,525	3,050	-	706	1,182	951	791	709	1,407
Not specified	30	40	4	36	-	-	-	6	-	8	-	1
Percentage of products exported:												
None	3,226	2,004	1,351	966	1,070	6	194	301	179	356	214	465
Less than 10 percent	6,523	4,469	2,602	1,557	1,908	101	519	863	566	375	408	836
10 percent to 19 percent	1,973	1,333	773	292	557	21	123	307	238	206	131	215
20 percent to 49 percent	1,150	826	445	230	387	19	85	204	167	87	81	184
50 percent or more.....	332	275	155	46	75	3	24	53	23	7	3	53
Not specified	136	96	70	74	24	-	1	14	32	12	2	9
Value of goods and services:												
Less than \$750,000	460	305	183	68	110	3	19	59	49	44	19	42
\$750,000 to less than \$1 million.....	505	369	180	166	150	-	10	51	35	22	18	28
\$1 million to less than \$5 million.....	5,907	4,046	2,487	1,363	1,737	64	356	487	305	517	389	795
\$5 million to less than \$10 million.....	2,203	1,480	868	638	697	5	220	292	191	193	132	290
\$10 million to less than \$25 million.....	2,160	1,455	925	515	576	41	230	347	276	123	159	331
\$25 million to less than \$50 million.....	975	623	326	216	335	14	59	267	121	64	46	102
\$50 million to less than \$100 million	505	329	189	106	202	8	24	121	93	32	38	71
\$100 million or more.....	529	349	200	86	190	14	27	103	121	47	36	114
Not specified	94	46	39	7	25	-	-	16	14	1	2	16

See footnotes at end of table.

Table 2-7. Most Significant Anticipated Barriers to Acquisitions of Technologically Advanced Design and Engineering Equipment and Software over the Next 3 Years by Plant Characteristic—Continued

Plant characteristic	Cost of equipment (A)	Cost of software (B)	Cost of education and training (C)	Lack of skilled work force (D)	Lack of benefits (E)	Union contract (F)	Lack of technological information (G)	Lack of management support (H)	Incompatibility with other equipment (I)	Lack of product marketability (J)	Lack of technical support from vendors (K)	Other (L)
Products made to military specifications:												
Yes.....	5,526	3,544	2,218	1,364	1,654	70	410	739	640	493	361	832
No.....	6,743	4,706	2,759	1,596	2,020	66	462	860	491	506	432	784
Don't know.....	1,040	744	407	197	340	13	73	137	69	42	44	173
Not specified.....	29	10	13	9	6	-	-	6	6	-	2	-
Prime contractor to defense agencies:												
Yes: Percent of products shipped.....	3,765	2,591	1,608	777	1,064	40	282	521	476	270	347	611
1 percent to 24 percent.....	3,067	2,103	1,360	691	801	32	240	409	360	185	271	447
25 percent to 74 percent.....	377	276	124	58	150	7	35	47	62	57	45	82
75 percent or more.....	238	161	91	26	73	-	4	35	46	26	28	66
Don't know.....	83	52	34	1	40	1	2	30	7	2	4	16
No.....	9,075	6,042	3,578	2,331	2,844	93	642	1,105	675	758	478	1,117
Don't know.....	479	363	200	50	113	17	22	112	54	13	14	60
Not specified.....	20	8	10	6	-	-	-	5	-	-	-	-
Subcontractor to defense agencies:												
Yes: Percent of products shipped.....	5,834	3,899	2,361	1,416	1,684	43	478	740	597	501	399	908
1 percent to 24 percent.....	3,838	2,570	1,481	1,029	1,110	34	250	499	375	276	240	620
25 percent to 74 percent.....	1,101	749	479	198	260	8	154	102	105	157	115	213
75 percent or more.....	468	335	234	148	108	-	45	61	61	31	39	58
Don't know.....	426	245	167	41	206	1	30	77	57	37	5	18
No.....	4,328	2,930	1,816	1,094	1,298	26	308	530	349	411	297	566
Don't know.....	3,110	2,128	1,209	644	1,014	81	158	467	255	130	142	315
Not specified.....	68	46	11	11	25	-	1	5	4	-	1	-
Foreign owned ¹ :												
Yes.....	1,250	798	450	233	384	21	84	230	129	97	72	185
No.....	11,540	7,896	4,802	2,829	3,445	124	825	1,393	1,031	906	727	1,556
Don't know.....	435	254	114	65	150	4	32	102	40	38	29	47
Not specified.....	114	56	32	38	42	-	5	17	5	1	11	1

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 2-8. Benefits Derived from the Use of Technologically Advanced Design and Engineering Equipment and Software by Plant Characteristic

Plant characteristic	Labor cost reduction (A)	Quality improvement (B)	Flexibility increase (C)	Setup time reductions (D)	Equipment utilization increase (E)	Inventory reduction (F)	Lead time reduction (G)	Marketing advantage (H)	Other (I)	Not applicable (J)
Major Group:										
34, Fabricated Metal Products .	3,871	4,619	2,852	1,120	697	376	2,325	1,916	183	6,079
35, Industrial Machinery and Equipment	5,088	7,049	4,275	1,237	867	279	3,132	2,767	295	4,118
36, Electronic and Other Electric Equipment	2,846	3,702	2,118	668	480	233	1,665	1,254	175	1,979
37, Transportation Equipment .	1,116	1,597	1,028	337	206	108	710	582	119	1,729
38, Instruments and Related Products	1,517	1,993	1,270	279	218	106	756	573	107	1,157
Age of plant:										
Less than 5 years	2,004	2,893	1,801	481	364	166	1,145	1,083	213	1,899
5 years to 14 years	4,771	6,128	3,509	1,293	764	409	2,903	2,292	251	4,888
15 years to 29 years	4,398	5,671	3,661	1,090	758	325	2,505	2,089	263	4,578
30 years or more	3,218	4,207	2,555	758	581	202	2,013	1,603	141	3,463
Not specified	46	61	17	19	2	1	23	25	10	234
Number of employees:										
Less than 20	927	1,062	669	330	157	61	449	416	37	3,183
20 to 99	8,004	10,387	6,235	2,181	1,255	622	4,498	4,100	510	9,708
100 to 499	4,413	5,971	3,693	952	870	327	2,829	2,112	240	1,929
500 to 999	627	897	542	103	110	48	472	273	40	103
1,000 or more	425	599	368	70	70	43	328	163	45	33
Not specified	43	44	35	4	7	1	13	28	7	108
Unionized plants:										
Yes	2,784	3,431	2,245	681	405	286	1,732	1,255	165	2,759
Contract in effect:										
Yes	2,712	3,358	2,183	669	401	283	1,680	1,230	163	2,618
No	71	73	62	12	4	3	52	25	2	141
No	11,642	15,497	9,242	2,950	2,040	817	6,844	5,813	713	12,221
Not specified	12	32	56	10	23	-	13	24	-	83
Percentage of products exported:										
None	2,875	3,647	2,102	932	521	243	1,521	1,655	223	6,272
Less than 10 percent	6,859	8,856	5,325	1,782	1,150	516	4,084	3,512	371	6,371
10 percent to 19 percent	2,339	3,124	2,088	492	324	193	1,569	927	123	1,318
20 percent to 49 percent	1,784	2,525	1,564	293	352	121	1,017	791	110	758
50 percent or more	425	648	403	70	79	29	323	134	43	134
Not specified	156	160	61	72	42	-	75	73	10	211
Value of goods and services:										
Less than \$750,000	386	438	319	92	89	17	197	59	6	1,356
\$750,000 to less than \$1 million	471	416	238	182	100	65	179	120	11	1,154
\$1 million to less than \$5 million	5,057	6,627	3,884	1,473	763	373	2,912	2,796	350	7,937
\$5 million to less than \$10 million	3,063	3,917	2,233	718	462	214	1,708	1,493	145	2,320
\$10 million to less than \$25 million	2,720	3,698	2,429	626	549	184	1,747	1,434	176	1,266
\$25 million to less than \$50 million	1,333	1,799	1,113	283	247	140	819	569	73	409
\$50 million to less than \$100 million	660	987	662	114	126	45	449	285	50	192
\$100 million or more	662	959	569	115	116	57	532	285	54	76
Not specified	86	119	94	38	17	8	46	51	13	354
Products made to military specifications:										
Yes	6,191	7,918	4,790	1,644	985	433	3,561	3,050	343	5,397
No	7,078	9,530	5,807	1,732	1,341	594	4,451	3,490	469	8,174
Don't know	1,124	1,469	928	245	138	76	539	512	66	1,348
Not specified	45	44	19	20	4	-	38	40	-	145

See footnotes at end of table.

Table 2-8. Benefits Derived from the Use of Technologically Advanced Design and Engineering Equipment and Software by Plant Characteristic—Continued

Plant characteristic	Labor cost reduction (A)	Quality improvement (B)	Flexibility increase (C)	Setup time reductions (D)	Equipment utilization increase (E)	Inventory reduction (F)	Lead time reduction (G)	Marketing advantage (H)	Other (I)	Not applicable (J)
Prime contractor to defense agencies:										
Yes: Percent of products shipped	4,537	5,828	3,446	1,085	716	319	2,488	2,100	242	3,083
1 percent to 24 percent	3,576	4,795	2,781	908	560	279	2,029	1,780	208	2,454
25 percent to 74 percent	600	628	428	120	93	19	299	182	23	333
75 percent or more	269	279	139	34	38	20	93	106	11	175
Don't know	91	126	99	23	25	1	67	33	-	121
No	9,332	12,347	7,561	2,438	1,685	721	5,797	4,758	581	11,108
Don't know	553	752	523	101	66	61	280	209	56	762
Not specified	16	33	12	16	2	2	24	24	-	111
Subcontractor to defense agencies:										
Yes: Percent of products shipped	6,581	8,572	5,109	1,752	977	389	4,165	3,310	351	4,859
1 percent to 24 percent	4,476	5,930	3,458	1,090	715	291	2,828	2,299	260	3,080
25 percent to 74 percent	1,341	1,553	977	352	141	51	766	617	57	907
75 percent or more	464	580	303	201	84	38	323	249	26	372
Don't know	300	510	371	110	38	9	248	145	8	500
No	4,678	5,865	3,730	1,126	838	420	2,549	2,074	280	6,112
Don't know	3,145	4,477	2,661	761	653	294	1,862	1,659	234	3,884
Not specified	34	47	43	1	-	-	13	49	15	208
Foreign owned ¹ :										
Yes	1,351	1,846	1,171	248	203	72	1,013	633	90	871
No	12,483	16,405	9,858	3,314	2,149	989	7,285	6,152	743	13,693
Don't know	485	581	433	70	96	38	253	210	45	285
Not specified	119	128	82	8	21	4	39	97	1	215

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 2-9. Percentage of Operations Anticipated to be Dependent on Technologically Advanced Design and Engineering Equipment and Software in 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products.....	13,353	2,694	1,541	1,252	1,230	2,472	3,999	164
35, Industrial Machinery and Equipment.....	14,037	2,029	1,476	1,456	1,811	4,276	2,795	194
36, Electronic and Other Electric Equipment.....	7,004	1,036	724	794	1,037	2,026	1,306	81
37, Transportation Equipment.....	4,003	823	337	277	516	812	1,197	39
38, Instruments and Related Products.....	3,854	615	453	495	576	955	737	23
Age of plant:								
Less than 5 years.....	6,005	1,038	592	578	773	1,705	1,255	63
5 years to 14 years.....	13,803	2,297	1,517	1,440	1,534	3,563	3,242	209
15 years to 29 years.....	12,685	2,144	1,401	1,228	1,682	3,086	3,012	132
30 years or more.....	9,424	1,671	1,011	997	1,171	2,172	2,306	96
Not specified.....	334	46	10	32	10	16	218	1
Number of employees:								
Less than 20.....	4,955	959	381	333	263	404	2,495	121
20 to 99.....	24,899	4,755	2,676	2,413	2,814	5,792	6,151	299
100 to 499.....	10,144	1,326	1,295	1,283	1,634	3,361	1,187	59
500 to 999.....	1,252	96	107	161	269	542	72	5
1,000 or more.....	801	35	66	76	172	416	25	10
Not specified.....	199	26	8	9	19	27	104	7
Unionized plants:								
Yes.....	7,842	1,448	879	876	1,104	1,690	1,739	107
Contract in effect:								
Yes.....	7,587	1,421	867	858	1,054	1,638	1,670	80
No.....	256	27	12	17	51	52	69	27
No.....	34,244	5,734	3,631	3,371	4,056	8,845	8,213	394
Not specified.....	165	15	22	28	11	7	82	-
Percentage of products exported:								
None.....	12,099	2,256	1,013	965	867	1,843	4,970	185
Less than 10 percent.....	19,125	3,543	2,111	2,042	2,487	4,937	3,788	217
10 percent to 19 percent.....	5,653	855	740	647	921	1,748	677	65
20 percent to 49 percent.....	3,925	392	511	463	668	1,507	371	13
50 percent or more.....	967	74	69	128	145	463	87	1
Not specified.....	481	77	88	30	82	43	140	21
Value of goods and services:								
Less than \$750,000.....	2,078	399	145	91	82	186	1,116	60
\$750,000 to less than \$1 million.....	1,917	411	131	119	129	233	861	33
\$1 million to less than \$5 million.....	17,806	3,566	1,876	1,765	1,729	3,486	5,146	238
\$5 million to less than \$10 million.....	7,853	1,375	913	792	1,193	2,143	1,339	97
\$10 million to less than \$25 million.....	6,464	854	758	840	947	2,219	808	39
\$25 million to less than \$50 million.....	2,827	263	406	336	545	990	279	7
\$50 million to less than \$100 million.....	1,467	141	138	181	259	597	140	10
\$100 million or more.....	1,283	77	120	121	247	640	67	11
Not specified.....	556	111	44	30	40	48	278	6
Products made to military specifications:								
Yes.....	16,650	2,569	2,044	1,769	2,162	4,499	3,380	227
No.....	22,010	4,042	2,214	2,115	2,600	5,247	5,524	267
Don't know.....	3,350	559	233	384	378	785	1,004	7
Not specified.....	241	27	40	7	31	11	125	-

See footnotes at end of table.

Table 2-9. **Percentage of Operations Anticipated to be Dependent on Technologically Advanced Design and Engineering Equipment and Software in 3 Years by Plant Characteristic—Continued**

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped . . .	11,107	1,615	1,332	1,258	1,656	3,205	1,876	166
1 percent to 24 percent	8,950	1,284	1,091	1,064	1,288	2,611	1,461	150
25 percent to 74 percent	1,285	211	156	129	251	339	187	12
75 percent or more	578	88	67	59	78	167	117	3
Don't know	294	32	17	7	38	88	111	-
No	29,173	5,404	3,038	2,788	3,234	6,926	7,460	323
Don't know	1,801	154	138	225	273	402	602	7
Not specified	170	24	23	4	8	9	96	6
Subcontractor to defense agencies:								
Yes: Percent of products shipped . . .	16,971	2,360	2,035	1,887	2,381	5,072	3,010	227
1 percent to 24 percent	11,232	1,565	1,372	1,267	1,517	3,464	1,960	87
25 percent to 74 percent	3,220	380	407	305	567	971	490	101
75 percent or more	1,295	246	132	151	177	395	183	11
Don't know	1,223	169	124	164	120	242	377	28
No	14,929	3,133	1,371	1,303	1,594	3,159	4,202	166
Don't know	10,057	1,661	1,099	1,081	1,184	2,275	2,655	103
Not specified	294	43	27	4	12	36	167	6
Foreign owned ¹ :								
Yes	3,349	387	438	351	493	1,126	529	26
No	37,340	6,614	3,913	3,786	4,412	9,024	9,146	445
Don't know	1,142	98	144	123	222	333	221	2
Not specified	420	99	38	15	43	59	137	28

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 2-10. Plans to Acquire Technologically Advanced Design and Engineering Equipment and Software over the Next 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Total replacement (75 percent or more) (B)	Major upgrade (25 percent to less than 75 percent) (C)	Minor upgrade (less than 25 percent) (D)	Under consideration, but no firm plans (E)	Not applicable (F)	Not specified (G)
Major Group:							
34, Fabricated Metal Products.....	13,353	209	1,600	2,817	4,090	4,474	163
35, Industrial Machinery and Equipment ..	14,037	333	2,044	4,078	4,292	3,168	122
36, Electronic and Other Electric Equipment	7,004	141	1,441	1,879	1,944	1,514	85
37, Transportation Equipment	4,003	100	512	837	1,127	1,398	29
38, Instruments and Related Products....	3,854	75	622	1,134	1,166	825	32
Age of plant:							
Less than 5 years.....	6,005	118	1,099	1,459	1,889	1,395	45
5 years to 14 years	13,803	209	1,966	3,631	4,202	3,650	146
15 years to 29 years	12,685	277	1,835	3,236	3,653	3,556	128
30 years or more	9,424	253	1,304	2,372	2,857	2,526	111
Not specified.....	334	-	16	47	18	252	-
Number of employees:							
Less than 20	4,955	49	345	577	1,359	2,578	48
20 to 99	24,899	418	3,228	5,665	8,350	6,961	278
100 to 499	10,144	297	1,965	3,662	2,546	1,583	90
500 to 999	1,252	56	359	500	231	102	5
1,000 or more	801	37	294	326	102	32	9
Not specified.....	199	1	29	15	30	125	-
Unionized plants:							
Yes	7,842	215	970	2,096	2,307	2,169	86
Contract in effect:							
Yes	7,587	213	933	2,045	2,198	2,112	86
No	256	2	37	51	109	57	-
No	34,244	642	5,240	8,638	10,266	9,114	344
Not specified.....	165	1	10	10	46	97	1
Percentage of products exported:							
None	12,099	151	956	2,039	3,534	5,291	129
Less than 10 percent.....	19,125	416	3,047	4,948	6,087	4,446	181
10 percent to 19 percent	5,653	152	1,022	1,922	1,541	950	67
20 percent to 49 percent	3,925	103	905	1,330	1,096	451	40
50 percent or more	967	20	222	385	243	94	2
Not specified.....	481	15	67	121	119	148	12
Value of goods and services:							
Less than \$750,000.....	2,078	16	109	196	475	1,241	42
\$750,000 to less than \$1 million.....	1,917	48	91	273	675	792	37
\$1 million to less than \$5 million.....	17,806	258	2,259	3,598	5,891	5,627	173
\$5 million to less than \$10 million	7,853	135	1,170	2,251	2,565	1,636	95
\$10 million to less than \$25 million	6,464	153	1,162	2,230	1,767	1,108	44
\$25 million to less than \$50 million	2,827	119	600	1,103	643	353	8
\$50 million to less than \$100 million	1,467	70	363	538	308	183	6
\$100 million or more	1,283	47	435	513	195	80	12
Not specified.....	556	11	32	44	99	359	12
Products made to military specifications:							
Yes	16,650	355	2,685	4,508	5,192	3,677	234
No	22,010	451	3,113	5,473	6,310	6,499	164
Don't know.....	3,350	52	396	744	1,070	1,056	32
Not specified.....	241	-	26	20	47	148	-

See footnotes at end of table.

Table 2-10. Plans to Acquire Technologically Advanced Design and Engineering Equipment and Software over the Next 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Total replacement (75 percent or more) (B)	Major upgrade (25 percent to less than 75 percent) (C)	Minor upgrade (less than 25 percent) (D)	Under consideration, but no firm plans (E)	Not applicable (F)	Not specified (G)
Prime contractor to defense agencies:							
Yes: Percent of products shipped.....	11,107	272	1,927	3,426	3,325	1,999	158
1 percent to 24 percent	8,950	208	1,515	2,863	2,654	1,596	115
25 percent to 74 percent	1,285	49	266	339	393	228	11
75 percent or more	578	5	107	157	172	132	5
Don't know.....	294	11	39	67	107	43	27
No	29,173	560	3,961	6,951	8,780	8,676	246
Don't know.....	1,801	25	318	350	502	585	21
Not specified.....	170	-	14	18	12	120	6
Subcontractor to defense agencies:							
Yes: Percent of products shipped.....	16,971	344	3,067	4,904	5,116	3,400	139
1 percent to 24 percent	11,232	230	2,001	3,511	3,221	2,197	72
25 percent to 74 percent	3,220	60	700	835	979	598	49
75 percent or more	1,295	19	256	308	491	212	9
Don't know.....	1,223	35	110	250	425	393	9
No	14,929	303	1,867	3,431	4,408	4,783	136
Don't know.....	10,057	210	1,236	2,394	3,074	2,995	149
Not specified.....	294	1	50	15	21	201	6
Foreign owned¹:							
Yes	3,349	120	582	1,054	893	675	26
No	37,340	690	5,360	9,259	11,400	10,258	373
Don't know.....	1,142	42	226	339	274	257	4
Not specified.....	420	5	53	93	52	189	27

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 2-11. Anticipated Cost to Acquire Technologically Advanced Design and Engineering Equipment and Software over the Next 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	6,680	1,337	52	1	4	5,123	156
35, Industrial Machinery and Equipment	14,037	7,894	2,121	181	30	6	3,707	98
36, Electronic and Other Electric Equipment	7,004	3,473	1,450	198	33	28	1,731	90
37, Transportation Equipment	4,003	1,716	586	95	22	25	1,514	46
38, Instruments and Related Products	3,854	1,901	784	143	20	13	938	54
Age of plant:								
Less than 5 years	6,005	3,128	1,086	89	11	6	1,627	58
5 years to 14 years	13,803	7,222	1,850	206	26	18	4,322	161
15 years to 29 years	12,685	6,570	1,865	185	30	19	3,883	133
30 years or more	9,424	4,690	1,457	188	38	33	2,925	93
Not specified	334	53	20	1	1	1	257	-
Number of employees:								
Less than 20	4,955	1,938	189	6	-	-	2,741	81
20 to 99	24,899	13,901	2,440	40	11	-	8,265	242
100 to 499	10,144	5,286	2,756	253	18	6	1,719	106
500 to 999	1,252	383	554	155	18	19	119	4
1,000 or more	801	114	312	212	59	52	41	10
Not specified	199	42	26	2	-	-	129	-
Unionized plants:								
Yes	7,842	3,729	1,264	202	32	30	2,487	97
Contract in effect:								
Yes	7,587	3,586	1,217	197	30	30	2,429	97
No	256	143	47	5	2	-	58	-
No	34,244	17,885	4,998	465	74	46	10,428	347
Not specified	165	50	15	1	-	-	99	-
Percentage of products exported:								
None	12,099	5,050	971	23	17	9	5,889	141
Less than 10 percent	19,125	10,736	2,703	252	34	17	5,172	212
10 percent to 19 percent	5,653	3,192	1,184	140	13	22	1,060	43
20 percent to 49 percent	3,925	2,018	1,041	185	29	18	601	34
50 percent or more	967	440	314	58	12	9	131	3
Not specified	481	228	66	11	1	2	162	12
Value of goods and services:								
Less than \$750,000	2,078	604	113	8	-	-	1,295	58
\$750,000 to less than \$1 million	1,917	905	96	-	-	-	876	40
\$1 million to less than \$5 million	17,806	9,492	1,468	16	-	-	6,652	178
\$5 million to less than \$10 million	7,853	4,749	1,054	40	11	-	1,932	67
\$10 million to less than \$25 million	6,464	3,768	1,336	103	-	-	1,204	53
\$25 million to less than \$50 million	2,827	1,236	1,066	100	11	2	398	13
\$50 million to less than \$100 million	1,467	507	597	116	24	9	200	13
\$100 million or more	1,283	253	519	281	57	64	98	10
Not specified	556	148	29	4	3	1	359	12
Products made to military specifications:								
Yes	16,650	8,783	2,635	324	61	43	4,573	231
No	22,010	11,130	3,280	309	40	30	7,053	169
Don't know	3,350	1,685	343	34	5	4	1,236	45
Not specified	241	66	20	2	-	-	153	-

See footnotes at end of table.

Table 2-11. Anticipated Cost to Acquire Technologically Advanced Design and Engineering Equipment and Software over the Next 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped	11,107	6,049	2,067	259	61	38	2,516	117
1 percent to 24 percent	8,950	5,047	1,612	142	45	15	1,991	98
25 percent to 74 percent	1,285	658	288	58	8	7	251	14
75 percent or more	578	219	128	53	8	13	152	5
Don't know	294	124	38	5	-	3	123	-
No	29,173	14,816	3,940	363	41	35	9,693	284
Don't know	1,801	772	254	45	4	3	685	37
Not specified	170	27	16	1	-	-	120	6
Subcontractor to defense agencies:								
Yes: Percent of products shipped	16,971	9,402	2,839	351	64	39	4,110	165
1 percent to 24 percent	11,232	6,503	1,763	229	31	26	2,572	108
25 percent to 74 percent	3,220	1,719	609	82	20	9	742	40
75 percent or more	1,295	616	314	17	8	2	324	14
Don't know	1,223	565	152	23	5	2	472	3
No	14,929	7,205	2,002	197	28	26	5,336	134
Don't know	10,057	4,982	1,422	114	14	10	3,375	140
Not specified	294	74	14	6	-	1	193	6
Foreign owned ¹ :								
Yes	3,349	1,697	789	106	15	12	705	25
No	37,340	19,368	5,157	486	73	55	11,816	384
Don't know	1,142	482	258	69	10	8	308	7
Not specified	420	116	73	8	8	1	186	27

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Chapter 3. Fabrication and Machining

Fabrication and Machining includes the following technologies:

- Flexible manufacturing cell(s) (FMC) or flexible manufacturing systems (FMS)
- NC/CNC machine(s)
- Materials working laser(s)
- Pick and place robot(s)
- Other robots

An average of 52 percent of plants classified in each of the five SIC major groups indicated that fabrication and machining equipment was not applicable to operations or was used in less than 10 percent of operations. Fourteen percent (2,033) of plants classified in SIC major group 35 (Industrial Machinery and Equipment) reported usage of fabrication and machining in 75 percent or more of operations, which is the highest in this category for any of the industries. Most plants anticipate an increase in the usage of fabrication and machining equipment over the next 3 years. The percentage of plants reporting less than 10 percent of operations dependent on fabrication and machining equipment is expected to decrease from the current rate of 27 percent (11,258) to 20 percent (8,255), while the percentage of plants reporting usage of fabrication and machining in each of the remaining four categories (10 to 24 percent, 25 to 49 percent, 50 to 74 percent, and 75 percent or more) is expected to increase by 1 to 2 percent.

Total investments (excluding education and training) in fabrication and machining equipment remained under \$100,000 for the majority of plants surveyed. The amount invested was affected by employment size, with plants employing 500 or less reporting investments under \$100,000, compared with plants having 500 or more employees reporting investments of \$1 to 5 million. The total value of shipments for a plant also had an impact on investments in fabrication and machining equipment. Plants with value of shipments less than \$25 million tended to invest less than \$100,000, while those with shipments of \$25 to 100 million were more likely to invest \$100,000 to \$1 million, and those with shipments of \$100 million or more reported investments of \$1 to 5 million.

The average length of time to install fabrication and machining equipment and have it fully operational was less

than 3 months for each of the five major groups. Thirty-five percent (432) of plants with 500 to 999 employees tended to take 3 to 6 months for installation, and plants with 1,000 or more employees tended to take 6 months to a year. Similarly, plants with value of shipments less than \$25 million took less than 3 months to get equipment fully operational, compared with 3 to 6 months for plants with value of shipments of \$25 to 100 million, and 6 months to a year for plants with value of shipments of \$100 million or more.

Usage of fabrication and machining equipment had little impact on education and training costs, with the majority of plants in each major SIC group indicating that such costs were not applicable to operations. Of those that did report education and training costs associated with this type of equipment, most indicated expenditures of less than \$10,000. Plants with 500 or more employees or having value of shipments of \$50 million or more were more likely to spend \$10,000 to \$50,000.

Overall cost was the most frequently reported problem in the acquisition of fabrication and machining equipment over the past 3 years. Lack of financial justification and cost of education and training were the second and third most cited problems, respectively.

The majority of plants classified in each of the five industries have no firm plans to acquire fabrication and machining equipment over the next 3 years. Plants with less than 100 employees or having value of shipments under \$25 million indicated no firm plans for future acquisitions, compared with plants having 500 or more employees or shipments of \$25 million or more, who anticipated minor upgrades.

Plants classified in four of the five SIC major groups anticipate costs to acquire fabrication and machining equipment over the next 3 years to be less than \$100,000. The majority of plants classified in SIC major group 34 (Fabricated Metal Products), however, expect to spend slightly higher amounts: \$100,000 to \$1 million. The most commonly cited barrier to acquisition foreseen in the next 3 years by the majority of plants surveyed is equipment cost, followed by software cost, and education and training costs.

Improved quality appears to be the greatest benefit derived by plants using fabrication and machining equipment. Reduced labor and increased flexibility were also commonly reported benefits.

Table 3-1. Percentage of Operations Dependent on Technologically Advanced Fabrication and Machining Equipment and Software by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	3,918	1,909	1,714	1,189	896	3,683	44
35, Industrial Machinery and Equipment	14,037	3,188	2,187	2,304	1,934	2,033	2,340	51
36, Electronic and Other Electric Equipment	7,004	1,962	1,133	888	713	627	1,658	22
37, Transportation Equipment	4,003	1,119	551	403	340	388	1,171	32
38, Instruments and Related Products	3,854	1,071	532	512	435	297	984	23
Age of plant:								
Less than 5 years	6,005	1,662	790	714	513	737	1,571	16
5 years to 14 years	13,803	3,567	1,973	2,047	1,479	1,507	3,191	39
15 years to 29 years	12,685	3,346	2,012	1,729	1,603	1,217	2,734	44
30 years or more	9,424	2,653	1,527	1,313	995	775	2,090	71
Not specified	334	30	10	18	21	5	249	-
Number of employees:								
Less than 20	4,955	1,178	429	600	382	299	2,009	59
20 to 99	24,899	7,009	3,343	3,166	2,434	2,559	6,320	68
100 to 499	10,144	2,773	2,051	1,614	1,370	991	1,309	35
500 to 999	1,252	198	313	247	219	209	65	2
1,000 or more	801	73	156	181	185	177	21	7
Not specified	199	27	20	14	21	7	110	-
Unionized plants:								
Yes	7,842	2,464	1,210	1,266	814	460	1,600	28
Contract in effect:								
Yes	7,587	2,386	1,187	1,243	763	450	1,529	28
No	256	77	22	23	51	10	71	-
No	34,244	8,770	5,064	4,553	3,776	3,772	8,166	142
Not specified	165	24	39	2	20	10	69	-
Percentage of products exported:								
None	12,099	2,724	1,269	1,516	1,330	1,289	3,928	43
Less than 10 percent	19,125	5,594	3,266	2,385	1,923	1,779	4,109	69
10 percent to 19 percent	5,653	1,516	974	1,081	708	490	870	14
20 percent to 49 percent	3,925	1,081	584	653	518	470	586	32
50 percent or more	967	231	144	160	85	160	189	-
Not specified	481	112	76	27	47	54	153	13
Value of goods and services:								
Less than \$750,000	2,078	477	127	239	75	131	1,005	24
\$750,000 to less than \$1 million	1,917	453	199	255	128	140	723	19
\$1 million to less than \$5 million	17,806	4,845	2,151	2,179	1,913	1,811	4,833	75
\$5 million to less than \$10 million	7,853	2,490	1,297	1,021	715	799	1,528	2
\$10 million to less than \$25 million	6,464	1,795	1,340	982	775	607	939	26
\$25 million to less than \$50 million	2,827	685	604	512	431	268	313	13
\$50 million to less than \$100 million	1,467	268	279	308	239	196	173	4
\$100 million or more	1,283	161	257	271	267	258	61	8
Not specified	556	85	58	55	67	32	260	-
Products made to military specifications:								
Yes	16,650	4,051	2,689	2,511	2,170	2,241	2,946	43
No	22,010	6,329	3,216	2,745	2,026	1,729	5,863	102
Don't know	3,350	858	398	551	374	270	874	25
Not specified	241	20	9	16	42	1	152	-

See footnotes at end of table.

Table 3-1. **Percentage of Operations Dependent on Technologically Advanced Fabrication and Machining Equipment and Software by Plant Characteristic—Continued**

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped	11,107	2,743	1,877	1,766	1,346	1,293	2,041	41
1 percent to 24 percent.....	8,950	2,270	1,555	1,418	988	1,083	1,610	25
25 percent to 74 percent.....	1,285	255	188	274	221	133	202	12
75 percent or more.....	578	142	100	44	100	72	116	4
Don't know.....	294	76	34	30	37	4	112	-
No	29,173	8,025	4,175	3,806	3,051	2,816	7,177	123
Don't know.....	1,801	482	254	249	187	133	489	7
Not specified	170	8	6	-	27	-	128	-
Subcontractor to defense agencies:								
Yes: Percent of products shipped	16,971	3,981	2,695	2,643	2,463	2,291	2,848	49
1 percent to 24 percent.....	11,232	2,782	1,927	1,666	1,555	1,351	1,924	29
25 percent to 74 percent.....	3,220	610	531	540	531	504	486	19
75 percent or more.....	1,295	238	107	264	226	312	149	-
Don't know.....	1,223	352	131	173	152	125	290	1
No	14,929	4,371	2,012	1,746	1,295	1,139	4,284	81
Don't know.....	10,057	2,869	1,586	1,420	818	789	2,534	40
Not specified	294	37	19	13	34	23	168	-
Foreign owned ¹ :								
Yes.....	3,349	782	529	554	400	453	616	16
No	37,340	10,120	5,565	5,043	4,016	3,568	8,875	152
Don't know.....	1,142	277	178	209	133	170	175	1
Not specified	420	79	40	16	62	51	169	2

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 3-2. Total Investment in Technologically Advanced Fabrication and Machining Equipment and Software over the Last 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	5,452	3,006	679	89	45	4,005	77
35, Industrial Machinery and Equipment	14,037	5,351	4,375	1,155	119	140	2,837	60
36, Electronic and Other Electric Equipment	7,004	2,821	1,545	559	154	157	1,732	35
37, Transportation Equipment	4,003	1,271	807	363	93	126	1,328	16
38, Instruments and Related Products	3,854	1,476	990	232	41	40	1,055	20
Age of plant:								
Less than 5 years	6,005	2,455	1,411	402	46	38	1,633	21
5 years to 14 years	13,803	5,685	3,391	734	107	118	3,719	48
15 years to 29 years	12,685	4,668	3,569	1,020	166	147	3,062	52
30 years or more	9,424	3,498	2,326	826	176	202	2,316	80
Not specified	334	65	26	6	-	2	227	7
Number of employees:								
Less than 20	4,955	2,098	508	33	-	-	2,249	68
20 to 99	24,899	10,478	6,247	916	25	2	7,131	99
100 to 499	10,144	3,536	3,403	1,436	221	129	1,391	29
500 to 999	1,252	179	363	385	145	110	66	5
1,000 or more	801	44	146	212	103	267	24	4
Not specified	199	37	56	5	1	-	97	2
Unionized plants:								
Yes	7,842	3,098	1,735	794	210	228	1,720	58
Contract in effect:								
Yes	7,587	2,967	1,709	784	203	223	1,643	58
No	256	131	26	10	7	5	76	0
No	34,244	13,218	8,952	2,190	283	279	9,175	148
Not specified	165	56	36	4	2	1	63	2
Percentage of products exported:								
None	12,099	4,492	2,753	454	39	35	4,239	87
Less than 10 percent	19,125	7,602	4,948	1,441	214	202	4,641	76
10 percent to 19 percent	5,653	2,216	1,672	540	120	93	998	14
20 percent to 49 percent	3,925	1,544	1,051	387	83	136	708	15
50 percent or more	967	302	239	136	28	34	226	2
Not specified	481	216	59	29	11	7	144	14
Value of goods and services:								
Less than \$750,000	2,078	801	98	19	1	-	1,136	23
\$750,000 to less than \$1 million	1,917	901	274	-	-	1	704	38
\$1 million to less than \$5 million	17,806	7,622	4,271	401	1	-	5,430	82
\$5 million to less than \$10 million	7,853	3,278	2,069	594	40	3	1,855	13
\$10 million to less than \$25 million	6,464	2,440	2,177	703	79	27	1,011	27
\$25 million to less than \$50 million	2,827	770	1,011	574	81	65	311	15
\$50 million to less than \$100 million	1,467	259	478	348	118	93	169	2
\$100 million or more	1,283	128	262	332	175	311	70	5
Not specified	556	173	84	17	-	8	272	2
Products made to military specifications:								
Yes	16,650	6,217	5,077	1,423	194	251	3,429	59
No	22,010	8,761	4,874	1,285	277	227	6,464	121
Don't know	3,350	1,342	740	269	24	29	921	24
Not specified	241	52	31	11	-	-	144	2

See footnotes at end of table.

Table 3-2. Total Investment in Technologically Advanced Fabrication and Machining Equipment and Software over the Last 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped	11,107	4,327	3,127	893	139	179	2,411	31
1 percent to 24 percent	8,950	3,579	2,518	710	98	125	1,906	14
25 percent to 74 percent	1,285	476	392	103	19	21	262	13
75 percent or more	578	211	139	61	17	26	119	4
Don't know	294	61	77	19	5	7	124	-
No	29,173	11,475	7,134	1,927	315	297	7,880	145
Don't know	1,801	545	434	164	41	31	557	30
Not specified	170	25	28	4	-	-	110	2
Subcontractor to defense agencies:								
Yes: Percent of products shipped	16,971	6,298	5,323	1,548	235	236	3,253	76
1 percent to 24 percent	11,232	4,263	3,340	1,044	173	162	2,213	37
25 percent to 74 percent	3,220	1,097	1,166	280	27	32	603	16
75 percent or more	1,295	466	483	145	15	22	165	-
Don't know	1,223	472	335	80	20	21	272	23
No	14,929	5,959	3,036	770	162	160	4,765	77
Don't know	10,057	4,057	2,291	659	98	111	2,789	52
Not specified	294	57	72	10	1	1	150	2
Foreign owned ¹ :								
Yes	3,349	1,091	801	510	116	111	708	12
No	37,340	14,794	9,520	2,268	326	354	9,886	192
Don't know	1,142	346	308	194	50	37	206	1
Not specified	420	140	94	15	4	6	158	2

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 3-3. Average Length of Time from Placement of Order to Full Operation of Technologically Advanced Fabrication and Machining Equipment and Software by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than 3 months (B)	3 months to less than 6 months (C)	6 months to less than 1 year (D)	1 year to less than 2 years (E)	2 years to less than 3 years (F)	3 years or more (G)	Not applicable (H)	Not specified (I)
Major Group:									
34, Fabricated Metal Products	13,353	4,839	2,321	1,028	193	6	4	4,803	158
35, Industrial Machinery and Equipment	14,037	6,056	2,714	1,283	252	32	1	3,553	146
36, Electronic and Other Electric Equipment ..	7,004	2,395	1,350	749	124	21	15	2,287	64
37, Transportation Equipment	4,003	982	785	504	188	14	5	1,506	21
38, Instruments and Related Products	3,854	1,169	822	393	59	21	8	1,328	55
Age of plant:									
Less than 5 years	6,005	2,508	983	336	58	12	2	2,086	19
5 years to 14 years	13,803	5,366	2,584	979	162	22	3	4,528	158
15 years to 29 years	12,685	4,589	2,528	1,343	295	30	1	3,750	147
30 years or more	9,424	2,905	1,882	1,288	299	29	26	2,882	114
Not specified	334	72	13	11	2	-	-	232	5
Number of employees:									
Less than 20	4,955	1,980	327	98	23	-	-	2,440	87
20 to 99	24,899	10,255	4,055	1,459	161	35	16	8,656	262
100 to 499	10,144	2,962	2,950	1,648	320	36	8	2,144	77
500 to 999	1,252	143	432	408	137	8	2	109	14
1,000 or more	801	45	197	331	173	14	6	30	4
Not specified	199	55	30	13	2	-	-	100	-
Unionized plants:									
Yes	7,842	2,178	1,619	1,237	336	32	24	2,358	58
Contract in effect:									
Yes	7,587	2,114	1,559	1,214	327	32	24	2,259	58
No	256	64	60	24	9	-	-	99	-
No	34,244	13,216	6,347	2,716	480	62	9	11,029	386
Not specified	165	46	25	3	-	-	-	90	-
Percentage of products exported:									
None	12,099	4,988	1,581	544	83	26	4	4,735	138
Less than 10 percent	19,125	6,706	3,790	1,966	429	38	14	5,973	211
10 percent to 19 percent	5,653	1,926	1,362	779	160	20	7	1,348	51
20 percent to 49 percent	3,925	1,350	956	514	108	9	5	959	26
50 percent or more	967	308	200	137	32	1	1	280	7
Not specified	481	162	102	18	4	-	1	183	12
Value of goods and services:									
Less than \$750,000	2,078	695	149	51	22	-	-	1,113	47
\$750,000 to less than \$1 million	1,917	804	167	54	1	11	14	803	62
\$1 million to less than \$5 million	17,806	7,958	2,339	677	126	6	2	6,530	168
\$5 million to less than \$10 million	7,853	2,841	1,805	650	27	34	4	2,419	72
\$10 million to less than \$25 million	6,464	2,050	1,750	911	181	7	1	1,511	53
\$25 million to less than \$50 million	2,827	614	902	654	131	15	3	487	20
\$50 million to less than \$100 million	1,467	179	503	462	85	1	1	228	8
\$100 million or more	1,283	106	348	472	232	19	6	93	6
Not specified	556	193	28	24	10	-	1	292	8
Products made to military specifications:									
Yes	16,650	6,449	3,590	1,800	341	38	23	4,233	176
No	22,010	7,772	3,735	1,865	427	55	9	7,914	233
Don't know	3,350	1,150	645	289	47	1	-	1,183	35
Not specified	241	68	21	3	-	-	-	148	-

See footnotes at end of table.

Table 3-3. Average Length of Time from Placement of Order to Full Operation of Technologically Advanced Fabrication and Machining Equipment and Software by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than 3 months (B)	3 months to less than 6 months (C)	6 months to less than 1 year (D)	1 year to less than 2 years (E)	2 years to less than 3 years (F)	3 years or more (G)	Not applicable (H)	Not specified (I)
Prime contractor to defense agencies:									
Yes: Percent of products shipped	11,107	3,922	2,489	1,378	250	22	9	2,933	104
1 percent to 24 percent	8,950	3,274	1,913	1,078	168	15	3	2,416	83
25 percent to 74 percent	1,285	478	356	170	30	3	2	228	18
75 percent or more	578	132	149	95	34	4	4	157	3
Don't know	294	38	70	35	18	-	-	132	-
No	29,173	10,976	5,137	2,376	520	69	23	9,792	279
Don't know	1,801	500	349	202	45	3	-	640	61
Not specified	170	42	16	-	-	-	-	112	-
Subcontractor to defense agencies:									
Yes: Percent of products shipped	16,971	6,873	3,553	1,921	352	26	20	4,029	196
1 percent to 24 percent	11,232	4,599	2,153	1,327	247	12	17	2,751	127
25 percent to 74 percent	3,220	1,281	887	308	65	7	1	641	31
75 percent or more	1,295	542	312	174	17	4	2	235	10
Don't know	1,223	451	201	113	23	3	-	403	29
No	14,929	5,047	2,619	1,115	283	45	6	5,673	141
Don't know	10,057	3,470	1,771	912	180	23	5	3,590	107
Not specified	294	50	48	8	1	-	1	186	-
Foreign owned ¹ :									
Yes	3,349	833	825	641	146	4	2	873	25
No	37,340	14,234	6,782	3,045	621	80	27	12,151	400
Don't know	1,142	277	304	241	48	10	3	259	-
Not specified	420	96	80	29	1	-	1	194	18

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 3-4. Impact of Technologically Advanced Fabrication and Machining Equipment and Software on Education and Training Costs by Plant Characteristic

Plant characteristic	Number of plants (A)	Increased significantly (B)	Increased moderately (C)	Increased marginally (D)	No change (E)	Decreased (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	1,079	2,139	2,846	1,793	56	5,384	57
35, Industrial Machinery and Equipment	14,037	2,088	3,439	2,651	1,678	49	4,085	48
36, Electronic and Other Electric Equipment ...	7,004	645	1,321	1,321	1,145	62	2,467	44
37, Transportation Equipment	4,003	425	711	654	473	39	1,661	42
38, Instruments and Related Products	3,854	311	625	815	595	38	1,427	43
Age of plant:								
Less than 5 years	6,005	550	1,023	1,139	816	20	2,443	14
5 years to 14 years	13,803	1,379	2,739	2,462	2,123	112	4,916	72
15 years to 29 years	12,685	1,556	2,529	2,732	1,575	55	4,173	65
30 years or more	9,424	1,047	1,926	1,919	1,143	56	3,258	74
Not specified	334	15	18	34	25	-	233	9
Number of employees:								
Less than 20	4,955	236	491	607	664	54	2,837	67
20 to 99	24,899	2,568	4,279	4,590	3,494	114	9,747	105
100 to 499	10,144	1,222	2,700	2,516	1,379	63	2,213	52
500 to 999	1,252	265	443	347	88	4	101	4
1,000 or more	801	241	297	185	41	7	24	5
Not specified	199	15	25	41	17	-	102	-
Unionized plants:								
Yes	7,842	879	1,582	1,720	902	18	2,714	27
Contract in effect:								
Yes	7,587	847	1,559	1,664	886	18	2,586	27
No	256	32	23	56	16	-	128	-
No	34,244	3,651	6,646	6,514	4,774	219	12,234	207
Not specified	165	17	7	53	6	6	75	-
Percentage of products exported:								
None	12,099	1,175	1,991	1,886	1,492	52	5,433	71
Less than 10 percent	19,125	2,033	3,783	3,974	2,585	147	6,489	113
10 percent to 19 percent	5,653	718	1,249	1,298	812	20	1,536	21
20 percent to 49 percent	3,925	437	871	919	648	24	1,010	17
50 percent or more	967	129	256	160	96	1	325	1
Not specified	481	55	85	50	50	-	230	12
Value of goods and services:								
Less than \$750,000	2,078	43	164	197	235	4	1,390	45
\$750,000 to less than \$1 million	1,917	115	248	213	289	1	1,024	26
\$1 million to less than \$5 million	17,806	1,924	2,880	3,153	2,387	116	7,265	81
\$5 million to less than \$10 million	7,853	731	1,539	1,704	1,219	58	2,590	12
\$10 million to less than \$25 million	6,464	771	1,523	1,568	928	28	1,610	38
\$25 million to less than \$50 million	2,827	340	881	737	343	24	482	21
\$50 million to less than \$100 million	1,467	253	494	341	129	6	238	6
\$100 million or more	1,283	344	439	312	84	6	93	5
Not specified	556	28	67	61	68	-	332	-
Products made to military specifications:								
Yes	16,650	2,110	3,799	3,835	1,856	81	4,870	100
No	22,010	2,132	3,735	3,756	3,339	127	8,807	114
Don't know	3,350	285	690	660	477	35	1,182	20
Not specified	241	20	10	36	11	-	164	-

See footnotes at end of table.

Table 3-4. **Impact of Technologically Advanced Fabrication and Machining Equipment and Software on Education and Training Costs by Plant Characteristic—Continued**

Plant characteristic	Number of plants (A)	Increased significantly (B)	Increased moderately (C)	Increased marginally (D)	No change (E)	Decreased (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped	11,107	1,245	2,470	2,542	1,419	73	3,298	60
1 percent to 24 percent	8,950	996	1,981	2,075	1,155	55	2,644	44
25 percent to 74 percent	1,285	132	316	284	179	9	350	14
75 percent or more	578	80	129	125	60	9	173	2
Don't know	294	37	44	58	25	-	131	-
No	29,173	3,162	5,473	5,303	3,961	157	10,977	140
Don't know	1,801	120	285	420	294	13	636	34
Not specified	170	20	6	22	9	-	112	-
Subcontractor to defense agencies:								
Yes: Percent of products shipped	16,971	2,283	3,834	3,938	2,065	122	4,634	94
1 percent to 24 percent	11,232	1,442	2,397	2,629	1,449	67	3,195	54
25 percent to 74 percent	3,220	441	841	785	349	11	770	24
75 percent or more	1,295	225	361	300	114	42	247	6
Don't know	1,223	176	235	225	152	2	423	10
No	14,929	1,289	2,570	2,512	2,026	79	6,372	80
Don't know	10,057	954	1,775	1,814	1,556	42	3,857	60
Not specified	294	21	55	22	36	-	161	-
Foreign owned¹:								
Yes	3,349	350	840	812	423	11	908	6
No	37,340	3,982	7,031	7,216	5,012	227	13,667	205
Don't know	1,142	173	298	210	181	3	271	6
Not specified	420	43	66	47	66	1	178	18

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 3-5. Cost of Education and Training Related to the Use of Technologically Advanced Fabrication and Machining Equipment and Software over the Last 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than \$10,000 (B)	\$10,000 to less than \$50,000 (C)	\$50,000 to less than \$100,000 (D)	\$100,000 to less than \$250,000 (E)	\$250,000 to less than \$500,000 (F)	\$500,000 to less than \$1 million (G)	\$1 million to less than \$5 million (H)	\$5 million and over (I)	Not applicable (J)	Not specified (K)
Major Group:											
34, Fabricated Metal Products.....	13,353	5,462	1,946	378	193	41	14	8	7	5,127	176
35, Industrial Machinery and Equipment.....	14,037	5,973	2,723	863	345	110	25	22	5	3,765	205
36, Electronic and Other Electric Equipment.....	7,004	2,695	1,134	327	252	82	45	28	7	2,381	52
37, Transportation Equipment.....	4,003	1,319	578	237	139	46	40	25	9	1,571	40
38, Instruments and Related Products.....	3,854	1,472	597	189	112	32	19	4	2	1,364	62
Age of plant:											
Less than 5 years.....	6,005	2,452	1,014	165	94	21	8	2	8	2,189	51
5 years to 14 years.....	13,803	5,905	2,074	569	295	55	33	13	3	4,745	112
15 years to 29 years.....	12,685	4,957	2,178	731	330	121	43	20	8	4,067	229
30 years or more.....	9,424	3,533	1,690	526	323	113	58	52	10	2,987	131
Not specified.....	334	73	22	5	1	-	-	-	1	220	12
Number of employees:											
Less than 20.....	4,955	1,802	197	65	14	-	-	-	7	2,704	167
20 to 99.....	24,899	10,757	3,643	788	200	35	-	-	-	9,220	257
100 to 499.....	10,144	3,970	2,625	754	489	117	26	5	-	2,067	90
500 to 999.....	1,252	267	363	224	179	72	40	12	1	90	6
1,000 or more.....	801	68	122	159	160	87	77	71	23	26	7
Not specified.....	199	57	28	6	-	-	-	-	-	102	7
Unionized plants:											
Yes.....	7,842	2,883	1,363	478	307	128	71	52	15	2,465	79
Contract in effect:											
Yes.....	7,587	2,805	1,351	458	298	123	70	51	15	2,337	78
No.....	256	78	12	20	9	5	1	1	-	128	1
No.....	34,244	13,967	5,597	1,516	727	181	72	36	16	11,678	456
Not specified.....	165	70	18	1	8	2	-	-	-	66	-
Percentage of products exported:											
None.....	12,099	4,873	1,593	210	153	15	16	2	3	5,099	134
Less than 10 percent.....	19,125	7,799	3,286	1,000	390	135	51	36	9	5,146	274
10 percent to 19 percent.....	5,653	2,200	1,125	406	234	61	35	18	6	1,484	84
20 percent to 49 percent.....	3,925	1,527	731	251	204	89	37	21	9	1,032	24
50 percent or more.....	967	309	198	115	47	9	4	9	2	270	3
Not specified.....	481	211	45	13	13	1	-	2	1	178	17
Value of goods and services:											
Less than \$750,000.....	2,078	753	30	3	14	-	-	-	-	1,231	47
\$750,000 to less than \$1 million.....	1,917	758	98	11	-	-	-	-	-	955	93
\$1 million to less than \$5 million.....	17,806	7,502	2,604	530	77	9	-	-	7	6,875	202
\$5 million to less than \$10 million.....	7,853	3,487	1,246	259	160	14	-	1	-	2,601	85
\$10 million to less than \$25 million.....	6,464	2,743	1,433	463	216	47	9	1	-	1,503	49
\$25 million to less than \$50 million.....	2,827	980	848	265	198	54	6	5	-	434	39
\$50 million to less than \$100 million.....	1,467	363	417	209	151	74	30	4	-	204	14
\$100 million or more.....	1,283	162	264	248	224	104	97	74	22	81	6
Not specified.....	556	171	39	8	1	8	-	2	2	324	-

See footnotes at end of table.

Table 3-5. Cost of Education and Training Related to the Use of Technologically Advanced Fabrication and Machining Equipment and Software over the Last 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than \$10,000 (B)	\$10,000 to less than \$50,000 (C)	\$50,000 to less than \$100,000 (D)	\$100,000 to less than \$250,000 (E)	\$250,000 to less than \$500,000 (F)	\$500,000 to less than \$1 million (G)	\$1 million to less than \$5 million (H)	\$5 million and over (I)	Not applicable (J)	Not specified (K)
Products made to military specifications:											
Yes	16,650	6,849	3,314	1,038	473	139	73	48	11	4,548	157
No	22,010	8,698	3,034	844	513	159	61	30	17	8,336	318
Don't know	3,350	1,314	615	109	55	14	8	9	3	1,174	49
Not specified	241	59	15	3	1	-	1	-	-	150	12
Prime contractor to defense agencies:											
Yes: Percent of products shipped	11,107	4,704	1,916	756	356	95	46	42	9	3,046	137
1 percent to											
24 percent	8,950	3,851	1,539	600	273	67	23	30	4	2,466	97
25 percent to											
74 percent	1,285	571	230	86	45	18	8	4	2	286	36
75 percent or more ...	578	184	114	59	29	8	13	6	2	159	3
Don't know	294	98	34	12	9	2	1	1	1	135	1
No	29,173	11,527	4,759	1,150	644	192	84	36	12	10,427	341
Don't know	1,801	643	293	89	41	24	13	10	9	622	57
Not specified	170	46	10	-	-	-	-	-	-	113	-
Subcontractor to defense agencies:											
Yes: Percent of products shipped	16,971	7,228	3,331	1,095	526	140	61	47	11	4,375	156
1 percent to											
24 percent	11,232	4,802	2,070	744	338	96	41	33	6	3,044	58
25 percent to											
74 percent	3,220	1,417	692	190	114	27	13	5	3	717	41
75 percent or more ...	1,295	566	325	119	34	13	1	5	1	228	2
Don't know	1,223	443	244	41	40	4	6	3	1	385	54
No	14,929	5,788	1,826	549	322	96	50	18	8	6,048	226
Don't know	10,057	3,819	1,777	351	194	66	32	22	11	3,633	153
Not specified	294	86	44	1	-	9	-	1	-	153	-
Foreign owned ¹ :											
Yes	3,349	1,289	692	237	177	76	17	6	1	839	15
No	37,340	15,084	5,927	1,650	792	206	113	66	26	12,970	506
Don't know	1,142	365	313	93	69	19	12	13	4	242	10
Not specified	420	181	46	15	4	9	-	2	-	157	5

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 3-6. Most Significant Problems Encountered over the Last 3 Years in the Acquisition or Use of Technologically Advanced Fabrication and Machining Equipment and Software by Plant Characteristic

Plant characteristic	Overall cost (A)	Cost of education and training (B)	Worker resistance (C)	Time to develop software (D)	Cost to develop software (E)	Increased maintenance expenses (F)	Need for market expansion (G)	Lack of financial justification (H)	Lack of technical support from vendors (I)	Other (J)
Major Group:										
34, Fabricated Metal Products	2,572	1,071	546	601	442	838	517	1,104	676	419
35, Industrial Machinery and Equipment	3,093	1,610	715	805	542	1,117	620	1,454	926	394
36, Electronic and Other Electric Equipment	1,342	614	345	430	233	490	225	651	393	242
37, Transportation Equipment	688	382	241	261	150	313	112	383	273	99
38, Instruments and Related Products	674	286	140	291	167	207	121	351	219	129
Age of plant:										
Less than 5 years	918	352	146	247	168	365	135	462	277	158
5 years to 14 years	2,468	1,238	522	784	484	872	504	1,077	860	337
15 years to 29 years	2,637	1,297	682	806	422	946	548	1,223	836	389
30 years or more	2,328	1,049	618	543	456	766	406	1,173	485	396
Not specified	19	28	19	7	4	17	1	7	29	-
Number of employees:										
Less than 20	559	284	96	69	158	162	112	298	128	36
20 to 99	4,483	2,146	884	1,119	761	1,460	882	1,956	1,226	564
100 to 499	2,544	1,171	758	827	414	905	487	1,256	818	502
500 to 999	413	177	136	183	86	214	58	238	177	110
1,000 or more	333	149	106	171	111	205	55	177	114	71
Not specified	38	36	6	19	3	19	1	18	24	-
Unionized plants:										
Yes	1,833	841	577	548	355	695	315	931	573	304
Contract in effect:										
Yes	1,800	811	573	515	351	685	306	899	556	300
No	33	30	4	33	3	10	8	32	18	4
No	6,489	3,078	1,408	1,796	1,161	2,257	1,272	3,005	1,899	977
Not specified	47	44	2	43	18	15	8	8	15	1
Percentage of products exported:										
None	1,968	900	406	281	330	509	366	898	411	388
Less than 10 percent	4,112	1,973	996	1,182	701	1,587	742	1,924	1,293	504
10 percent to 19 percent	1,170	488	285	461	258	540	286	608	351	197
20 percent to 49 percent	792	380	242	346	177	221	163	357	322	136
50 percent or more	213	138	50	99	59	57	23	116	70	50
Not specified	114	83	8	19	9	52	14	40	40	8
Value of goods and services:										
Less than \$750,000	248	92	38	22	67	35	4	36	5	1
\$750,000 to less than \$1 million	308	133	25	21	47	122	54	153	38	33
\$1 million to less than \$5 million	3,231	1,729	570	841	512	912	638	1,406	829	337
\$5 million to less than \$10 million	1,332	553	364	368	298	515	274	658	453	169
\$10 million to less than \$25 million	1,522	660	383	451	260	565	291	718	515	407
\$25 million to less than \$50 million	762	369	308	232	113	261	146	403	259	153
\$50 million to less than \$100 million	412	197	137	191	76	226	61	253	181	65
\$100 million or more	483	198	147	247	155	292	88	276	183	114
Not specified	71	32	15	16	5	39	38	41	23	2
Products made to military specifications:										
Yes	3,963	1,892	950	1,078	780	1,306	796	1,741	939	571
No	3,792	1,697	897	1,075	635	1,352	688	1,907	1,319	653
Don't know	602	351	139	229	115	292	111	282	215	50
Not specified	12	23	1	5	4	16	-	13	14	7

See footnotes at end of table.

Table 3-6. Most Significant Problems Encountered over the Last 3 Years in the Acquisition or Use of Technologically Advanced Fabrication and Machining Equipment and Software by Plant Characteristic—Continued

Plant characteristic	Overall cost (A)	Cost of education and training (B)	Worker resistance (C)	Time to develop software (D)	Cost to develop software (E)	Increased maintenance expenses (F)	Need for market expansion (G)	Lack of financial justification (H)	Lack of technical support from vendors (I)	Other (J)
Prime contractor to defense agencies:										
Yes: Percent of products shipped	2,423	1,153	641	764	518	928	425	1,103	732	373
1 percent to 24 percent	1,996	895	516	616	411	744	334	869	607	332
25 percent to 74 percent	202	150	55	65	57	134	51	100	72	25
75 percent or more	145	57	43	61	40	34	25	98	36	9
Don't know	80	52	27	22	10	16	15	37	17	7
No	5,641	2,617	1,260	1,528	941	1,933	1,114	2,695	1,658	883
Don't know	298	174	84	90	71	92	56	137	81	26
Not specified	7	18	1	5	3	14	-	9	16	-
Subcontractor to defense agencies:										
Yes: Percent of products shipped	4,107	1,821	932	1,126	739	1,446	814	1,706	1,083	654
1 percent to 24 percent	2,726	1,147	590	714	455	955	534	1,143	746	422
25 percent to 74 percent	763	379	182	205	133	225	169	319	207	168
75 percent or more	314	134	100	105	104	173	76	119	58	38
Don't know	304	162	61	103	47	93	36	126	71	26
No	2,369	1,200	593	688	439	834	448	1,185	803	382
Don't know	1,843	912	436	547	352	647	333	1,033	566	247
Not specified	52	30	24	26	4	39	-	18	35	-
Foreign owned ¹ :										
Yes	774	264	189	285	187	342	188	411	266	177
No	7,137	3,511	1,683	1,953	1,255	2,434	1,348	3,293	2,051	1,070
Don't know	336	107	86	116	58	127	59	184	86	36
Not specified	123	81	30	33	33	64	-	54	84	-

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 3-7. Most Significant Anticipated Barriers to Acquisitions of Technologically Advanced Fabrication and Machining Equipment and Software over the Next 3 Years by Plant Characteristic

Plant characteristic	Cost of equipment (A)	Cost of software (B)	Cost of education and training (C)	Lack of skilled work force (D)	Lack of benefits (E)	Union contract (F)	Lack of technological information (G)	Lack of management support (H)	Incompatibility with other equipment (I)	Lack of product marketability (J)	Lack of technical support from vendors (K)	Other (L)
Major Group:												
34, Fabricated Metal Products	5,305	2,314	1,763	1,614	1,695	268	447	559	499	499	322	537
35, Industrial Machinery and Equipment	5,686	2,276	2,182	2,069	1,443	198	227	495	363	442	308	1,004
36, Electronic and Other Electric Equipment	2,620	1,092	989	649	797	80	202	334	275	216	197	382
37, Transportation Equipment	1,602	671	491	458	631	77	107	242	117	153	111	252
38, Instruments and Related Products	1,274	669	414	216	397	33	108	183	115	91	70	202
Age of plant:												
Less than 5 years	2,049	963	639	450	556	18	170	176	180	91	131	263
5 years to 14 years	5,169	2,305	2,019	1,578	1,422	126	348	466	347	579	409	635
15 years to 29 years	5,086	1,993	1,789	1,649	1,701	173	325	609	408	499	314	810
30 years or more	4,125	1,716	1,367	1,317	1,271	339	249	554	436	234	149	668
Not specified	60	45	26	9	13	-	-	8	-	-	5	1
Number of employees:												
Less than 20	1,662	609	515	405	525	69	87	145	97	178	78	229
20 to 99	9,628	4,347	3,664	2,936	2,656	230	637	866	751	882	535	1,356
100 to 499	4,186	1,684	1,344	1,385	1,412	285	308	629	401	246	296	568
500 to 999	566	202	186	150	209	38	44	105	66	45	57	114
1,000 or more	400	161	113	103	155	32	16	58	56	51	41	101
Not specified	47	18	17	25	6	1	-	10	-	-	-	10
Unionized plants:												
Yes	3,615	1,212	1,097	1,200	1,273	646	273	554	355	275	192	505
Contract in effect:												
Yes	3,542	1,204	1,005	1,149	1,238	641	270	543	323	274	187	463
No	73	8	92	51	35	5	3	11	32	1	5	42
No	12,816	5,790	4,739	3,764	3,688	9	818	1,256	1,016	1,119	814	1,870
Not specified	57	19	4	40	2	1	-	4	-	8	-	2
Percentage of products exported:												
None	4,328	1,691	1,543	1,272	1,282	113	307	411	325	563	227	696
Less than 10 percent	8,013	3,431	2,810	2,638	2,281	389	560	882	642	457	559	1,041
10 percent to 19 percent	2,315	1,049	833	574	784	80	111	264	275	214	135	302
20 percent to 49 percent	1,317	576	446	369	461	48	76	199	104	143	75	240
50 percent or more	345	210	120	79	123	20	36	45	19	8	9	91
Not specified	171	65	88	73	31	6	1	13	6	17	2	9
Value of goods and services:												
Less than \$750,000	551	263	201	64	119	27	35	46	60	48	46	45
\$750,000 to less than \$1 million	606	315	265	223	165	15	18	82	42	48	19	39
\$1 million to less than \$5 million	7,410	3,239	2,895	2,168	2,014	127	486	573	457	724	357	1,063
\$5 million to less than \$10 million	2,745	1,278	927	903	858	166	138	270	263	188	177	365
\$10 million to less than \$25 million	2,566	1,009	859	892	791	119	254	364	260	160	228	414
\$25 million to less than \$50 million	1,265	458	331	381	472	100	67	257	121	83	67	171
\$50 million to less than \$100 million	605	211	185	168	263	45	50	115	84	52	56	98
\$100 million or more	623	221	156	145	266	49	33	102	82	71	52	166
Not specified	118	28	20	60	16	8	11	6	2	29	4	16

See footnotes at end of table.

Table 3-7. **Most Significant Anticipated Barriers to Acquisitions of Technologically Advanced Fabrication and Machining Equipment and Software over the Next 3 Years by Plant Characteristic—Continued**

Plant characteristic	Cost of equipment (A)	Cost of software (B)	Cost of education and training (C)	Lack of skilled work force (D)	Lack of benefits (E)	Union contract (F)	Lack of technological information (G)	Lack of management support (H)	Incompatibility with other equipment (I)	Lack of product marketability (J)	Lack of technical support from vendors (K)	Other (L)
Products made to military specifications:												
Yes.....	7,118	2,666	2,644	2,387	1,956	301	459	758	605	725	376	1,236
No.....	7,969	3,660	2,768	2,275	2,521	283	542	920	676	597	543	947
Don't know.....	1,372	685	414	331	479	72	91	130	84	79	87	194
Not specified.....	30	10	13	12	7	-	-	5	5	-	2	-
Prime contractor to defense agencies:												
Yes: Percent of products shipped.....	4,619	1,917	1,727	1,386	1,388	226	330	545	416	377	303	770
1 percent to 24 percent.....	3,803	1,564	1,441	1,187	1,072	187	277	446	364	304	237	563
25 percent to 74 percent.....	439	179	152	117	197	25	38	33	23	44	33	111
75 percent or more.....	273	127	105	54	81	5	8	28	17	26	30	80
Don't know.....	104	47	29	28	37	9	8	37	12	2	4	16
No.....	11,233	4,718	3,865	3,465	3,400	365	739	1,174	910	996	674	1,507
Don't know.....	615	378	238	144	175	64	23	90	45	29	29	100
Not specified.....	22	9	10	9	-	-	-	4	-	-	-	-
Subcontractor to defense agencies:												
Yes: Percent of products shipped.....	7,531	2,930	2,849	2,360	2,070	274	527	778	600	740	399	1,279
1 percent to 24 percent.....	4,969	1,901	1,768	1,577	1,243	206	303	563	409	386	257	890
25 percent to 74 percent.....	1,363	519	548	422	465	43	120	97	95	267	86	275
75 percent or more.....	652	264	328	263	110	16	34	72	24	59	37	91
Don't know.....	547	246	204	99	253	10	69	46	72	29	19	21
No.....	5,131	2,303	1,736	1,528	1,635	165	376	568	440	399	375	697
Don't know.....	3,756	1,736	1,248	1,104	1,247	217	188	463	307	262	225	402
Not specified.....	71	53	7	13	10	-	1	4	23	-	8	1
Foreign owned¹:												
Yes.....	1,439	614	369	357	523	91	93	213	92	123	98	276
No.....	14,370	6,131	5,294	4,473	4,173	538	960	1,490	1,213	1,229	856	2,023
Don't know.....	513	198	119	138	181	26	34	98	41	48	42	78
Not specified.....	166	79	57	37	86	1	5	11	24	2	11	1

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 3-8. Benefits Derived from the Use of Technologically Advanced Fabrication and Machining Equipment and Software by Plant Characteristic

Plant characteristic	Labor cost reduction (A)	Quality improvement (B)	Flexibility increase (C)	Setup time reductions (D)	Equipment utilization increase (E)	Inventory reduction (F)	Lead time reduction (G)	Marketing advantage (H)	Other (I)	Not applicable (J)
Major Group:										
34, Fabricated Metal Products	5,007	5,561	2,212	2,478	1,429	745	1,669	1,061	122	5,475
35, Industrial Machinery and Equipment.....	6,130	7,706	3,137	2,842	1,335	988	2,642	1,616	213	3,992
36, Electronic and Other Electric Equipment.....	2,935	3,279	1,302	1,176	569	587	1,139	521	91	2,644
37, Transportation Equipment..	1,413	1,709	730	675	454	223	477	297	81	1,724
38, Instruments and Related Products.....	1,640	1,742	672	680	367	288	555	218	44	1,492
Age of plant:										
Less than 5 years.....	2,185	2,688	1,078	936	476	366	783	387	216	2,382
5 years to 14 years.....	5,503	6,298	2,585	2,406	1,335	820	2,123	1,375	127	5,137
15 years to 29 years.....	5,398	6,332	2,524	2,396	1,340	905	2,103	1,154	100	4,360
30 years or more.....	3,976	4,615	1,861	2,079	997	739	1,455	765	95	3,224
Not specified.....	62	63	4	34	5	1	19	32	12	224
Number of employees:										
Less than 20.....	1,379	1,480	535	613	295	127	512	243	55	2,779
20 to 99.....	9,196	11,074	4,340	4,132	2,143	1,326	3,485	2,547	305	10,056
100 to 499.....	5,165	5,817	2,456	2,487	1,373	1,107	2,017	743	145	2,247
500 to 999.....	807	914	402	380	205	165	273	87	23	106
1,000 or more.....	520	643	295	227	129	103	189	54	22	37
Not specified.....	58	68	25	12	9	2	7	39	-	103
Unionized plants:										
Yes.....	3,513	3,920	1,684	1,740	757	756	1,162	460	115	2,657
Contract in effect:										
Yes.....	3,442	3,802	1,628	1,717	735	717	1,126	453	114	2,532
No.....	71	118	56	23	22	39	35	7	1	125
No.....	13,584	16,005	6,327	6,077	3,392	2,074	5,304	3,221	435	12,603
Not specified.....	29	72	42	34	4	1	17	32	-	67
Percentage of products exported:										
None.....	4,074	5,002	1,740	1,732	1,098	350	1,582	1,215	238	5,387
Less than 10 percent.....	8,042	9,197	3,907	3,828	1,937	1,409	2,800	1,725	185	6,615
10 percent to 19 percent.....	2,644	3,014	1,237	1,194	533	538	1,157	391	66	1,634
20 percent to 49 percent.....	1,817	2,077	925	836	431	457	702	241	59	1,152
50 percent or more.....	380	523	218	196	109	63	198	62	-	329
Not specified.....	168	184	26	66	45	14	43	78	3	209
Value of goods and services:										
Less than \$750,000.....	480	501	194	200	102	86	107	78	4	1,305
\$750,000 to less than \$1 million.....	554	636	248	255	177	68	242	135	7	919
\$1 million to less than \$5 million.....	6,484	7,777	2,968	2,594	1,392	723	2,493	1,802	298	7,534
\$5 million to less than \$10 million.....	3,089	3,719	1,395	1,583	778	560	1,260	814	61	2,798
\$10 million to less than \$25 million.....	3,132	3,549	1,470	1,712	826	633	1,189	513	62	1,604
\$25 million to less than \$50 million.....	1,586	1,680	796	693	428	418	561	142	58	517
\$50 million to less than \$100 million.....	807	1,001	473	390	228	169	329	91	31	207
\$100 million or more.....	803	956	458	351	205	154	274	89	28	126
Not specified.....	191	178	51	73	17	21	27	48	1	318
Products made to military specifications:										
Yes.....	7,543	9,111	3,670	3,382	1,766	1,160	2,877	1,786	123	4,890
No.....	8,191	9,158	3,592	3,857	2,034	1,527	3,092	1,631	366	9,084
Don't know.....	1,332	1,660	785	594	343	144	491	262	61	1,203
Not specified.....	60	68	6	18	11	-	21	34	-	150

See footnotes at end of table.

Table 3-8. Benefits Derived from the Use of Technologically Advanced Fabrication and Machining Equipment and Software by Plant Characteristic—Continued

Plant characteristic	Labor cost reduction (A)	Quality improvement (B)	Flexibility increase (C)	Setup time reductions (D)	Equipment utilization increase (E)	Inventory reduction (F)	Lead time reduction (G)	Marketing advantage (H)	Other (I)	Not applicable (J)
Prime contractor to defense agencies:										
Yes: Percent of products shipped	5,079	5,868	2,291	2,518	1,192	1,086	1,826	924	104	3,273
1 percent to 24 percent	4,019	4,703	1,866	2,075	978	958	1,540	793	84	2,608
25 percent to 74 percent	674	749	264	290	133	73	177	67	13	348
75 percent or more	289	316	113	114	59	42	66	53	4	167
Don't know	97	100	49	39	22	12	43	11	3	149
No	11,315	13,265	5,356	5,038	2,822	1,623	4,396	2,643	420	11,268
Don't know	703	830	404	294	128	120	253	114	26	672
Not specified	29	33	1	1	11	2	7	32	-	113
Subcontractor to defense agencies:										
Yes: Percent of products shipped	7,897	9,435	3,710	3,702	1,791	1,140	3,188	1,878	169	4,667
1 percent to 24 percent	5,250	6,227	2,486	2,393	1,263	819	2,037	1,241	131	3,155
25 percent to 74 percent	1,554	1,865	768	618	359	183	568	401	30	795
75 percent or more	677	789	197	395	112	70	328	155	6	269
Don't know	416	555	259	297	57	68	255	82	2	447
No	5,239	5,999	2,466	2,426	1,307	942	1,861	1,005	177	6,536
Don't know	3,934	4,470	1,846	1,713	1,039	749	1,422	771	204	3,945
Not specified	55	93	31	9	16	-	11	59	-	180
Foreign owned ¹ :										
Yes	1,447	1,857	744	863	420	393	582	255	46	984
No	15,020	17,332	6,913	6,719	3,559	2,280	5,675	3,259	496	13,852
Don't know	561	649	337	221	148	129	166	79	8	298
Not specified	97	158	60	47	27	29	59	120	-	193

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 3-9. Percentage of Operations Anticipated to be Dependent on Technologically Advanced Fabrication and Machining Equipment and Software in 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	2,915	2,294	1,910	1,427	1,130	3,602	75
35, Industrial Machinery and Equipment	14,037	2,259	2,342	2,334	2,292	2,192	2,512	105
36, Electronic and Other Electric Equipment	7,004	1,298	1,151	1,084	985	871	1,551	65
37, Transportation Equipment	4,003	957	481	531	391	475	1,135	34
38, Instruments and Related Products	3,854	826	626	625	464	391	896	25
Age of plant:								
Less than 5 years	6,005	1,183	971	853	719	809	1,452	20
5 years to 14 years	13,803	2,748	2,123	2,057	1,722	1,827	3,180	146
15 years to 29 years	12,685	2,338	2,126	2,024	1,817	1,530	2,789	61
30 years or more	9,424	1,947	1,660	1,523	1,296	872	2,050	76
Not specified	334	40	14	27	4	22	226	1
Number of employees:								
Less than 20	4,955	1,037	601	559	413	131	2,153	61
20 to 99	24,899	5,160	4,000	3,495	2,971	2,988	6,125	161
100 to 499	10,144	1,845	1,992	1,926	1,662	1,409	1,245	65
500 to 999	1,252	124	197	332	302	248	48	2
1,000 or more	801	55	93	163	202	254	26	7
Not specified	199	34	11	9	8	29	101	7
Unionized plants:								
Yes	7,842	1,793	1,399	1,378	990	611	1,623	49
Contract in effect:								
Yes	7,587	1,768	1,333	1,364	953	601	1,519	49
No	256	25	66	14	37	10	104	-
No	34,244	6,424	5,492	5,079	4,562	4,422	8,010	255
Not specified	165	38	3	27	6	27	64	-
Percentage of products exported:								
None	12,099	2,256	1,580	1,576	1,263	1,358	4,009	57
Less than 10 percent	19,125	3,997	3,303	3,013	2,610	2,171	3,881	150
10 percent to 19 percent	5,653	1,083	1,138	957	907	713	793	62
20 percent to 49 percent	3,925	657	707	693	567	608	682	11
50 percent or more	967	152	106	203	150	156	197	2
Not specified	481	110	60	42	60	53	135	21
Value of goods and services:								
Less than \$750,000	2,078	383	276	152	92	117	1,041	17
\$750,000 to less than \$1 million	1,917	456	181	275	150	98	714	42
\$1 million to less than \$5 million	17,806	3,684	2,650	2,378	2,164	2,098	4,699	133
\$5 million to less than \$10 million	7,853	1,789	1,393	1,258	981	844	1,553	34
\$10 million to less than \$25 million	6,464	1,188	1,307	1,164	1,023	844	897	43
\$25 million to less than \$50 million	2,827	441	578	609	476	404	307	14
\$50 million to less than \$100 million	1,467	149	269	315	335	240	153	6
\$100 million or more	1,283	104	159	275	313	353	71	7
Not specified	556	63	81	59	25	60	261	7
Products made to military specifications:								
Yes	16,650	2,753	2,905	2,798	2,647	2,499	2,885	163
No	22,010	4,793	3,420	3,218	2,415	2,176	5,861	126
Don't know	3,350	686	550	460	479	360	800	15
Not specified	241	24	19	7	17	24	150	-

See footnotes at end of table.

Table 3-9. Percentage of Operations Anticipated to be Dependent on Technologically Advanced Fabrication and Machining Equipment and Software in 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped . . .	11,107	1,954	1,947	1,755	1,802	1,484	2,072	92
1 percent to 24 percent	8,950	1,577	1,620	1,369	1,479	1,215	1,615	75
25 percent to 74 percent	1,285	213	180	299	208	143	230	13
75 percent or more	578	131	106	50	75	110	102	4
Don't know	294	33	42	38	40	16	125	-
No	29,173	5,974	4,611	4,481	3,561	3,313	7,044	189
Don't know	1,801	304	333	244	192	239	473	17
Not specified	170	24	2	4	3	24	108	6
Subcontractor to defense agencies:								
Yes: Percent of products shipped . . .	16,971	2,568	2,868	3,063	2,915	2,767	2,671	118
1 percent to 24 percent	11,232	1,803	1,888	2,160	1,784	1,761	1,767	69
25 percent to 74 percent	3,220	354	567	549	625	555	534	37
75 percent or more	1,295	164	243	175	346	293	70	6
Don't know	1,223	247	170	180	160	158	301	7
No	14,929	3,490	2,248	1,994	1,437	1,273	4,394	93
Don't know	10,057	2,157	1,747	1,415	1,197	971	2,484	86
Not specified	294	40	31	12	9	49	148	6
Foreign owned ¹ :								
Yes	3,349	540	600	576	529	578	510	16
No	37,340	7,420	6,075	5,667	4,801	4,226	8,894	257
Don't know	1,142	183	186	215	194	180	180	3
Not specified	420	113	32	26	34	75	113	27

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 3-10. Plans to Acquire Technologically Advanced Fabrication and Machining Equipment and Software over the Next 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Total replacement (75 percent or more) (B)	Major upgrade (25 percent to less than 75 percent) (C)	Minor upgrade (less than 25 percent) (D)	Under consideration, but no firm plans (E)	Not applicable (F)	Not specified (G)
Major Group:							
34, Fabricated Metal Products.....	13,353	86	1,737	2,920	4,562	3,908	141
35, Industrial Machinery and Equipment ..	14,037	110	2,457	4,000	4,470	2,880	119
36, Electronic and Other Electric Equipment	7,004	94	1,337	1,684	2,093	1,745	51
37, Transportation Equipment	4,003	34	504	853	1,262	1,324	26
38, Instruments and Related Products....	3,854	66	527	951	1,156	1,115	39
Age of plant:							
Less than 5 years.....	6,005	98	968	1,409	1,821	1,665	44
5 years to 14 years	13,803	120	1,992	3,320	4,616	3,591	166
15 years to 29 years	12,685	82	2,188	3,121	3,988	3,231	74
30 years or more	9,424	90	1,408	2,531	3,079	2,224	93
Not specified	334	-	6	27	39	261	-
Number of employees:							
Less than 20	4,955	6	308	767	1,586	2,222	66
20 to 99	24,899	217	3,346	5,503	8,700	6,904	231
100 to 499	10,144	136	2,208	3,253	2,875	1,597	74
500 to 999	1,252	23	413	513	227	74	2
1,000 or more	801	8	266	361	122	39	4
Not specified	199	-	20	11	33	135	-
Unionized plants:							
Yes	7,842	58	1,156	2,046	2,647	1,891	44
Contract in effect:							
Yes	7,587	57	1,122	2,002	2,557	1,804	44
No	256	1	33	44	90	87	-
No	34,244	325	5,398	8,351	10,841	8,996	333
Not specified	165	7	8	11	54	85	-
Percentage of products exported:							
None	12,099	59	1,173	2,496	3,993	4,295	82
Less than 10 percent	19,125	190	3,313	4,638	6,380	4,431	173
10 percent to 19 percent	5,653	62	1,055	1,748	1,697	1,049	42
20 percent to 49 percent	3,925	54	832	1,123	1,074	792	51
50 percent or more	967	15	161	265	287	233	5
Not specified	481	9	27	139	111	171	23
Value of goods and services:							
Less than \$750,000	2,078	40	94	279	440	1,177	49
\$750,000 to less than \$1 million	1,917	3	174	198	869	654	19
\$1 million to less than \$5 million	17,806	101	2,374	3,916	6,188	5,090	138
\$5 million to less than \$10 million	7,853	93	1,181	1,880	2,700	1,907	91
\$10 million to less than \$25 million	6,464	82	1,278	1,908	1,952	1,210	34
\$25 million to less than \$50 million	2,827	32	629	1,019	739	388	20
\$50 million to less than \$100 million	1,467	21	394	546	339	155	11
\$100 million or more	1,283	17	414	568	182	97	6
Not specified	556	1	25	95	134	294	8
Products made to military specifications:							
Yes	16,650	129	3,151	4,694	5,503	3,010	163
No	22,010	210	2,989	5,023	6,663	6,977	148
Don't know.....	3,350	51	410	665	1,345	814	65
Not specified	241	-	11	27	33	170	-

See footnotes at end of table.

Table 3-10. Plans to Acquire Technologically Advanced Fabrication and Machining Equipment and Software over the Next 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Total replacement (75 percent or more) (B)	Major upgrade (25 percent to less than 75 percent) (C)	Minor upgrade (less than 25 percent) (D)	Under consideration, but no firm plans (E)	Not applicable (F)	Not specified (G)
Prime contractor to defense agencies:							
Yes: Percent of products shipped.....	11,107	95	1,852	3,371	3,435	2,254	99
1 percent to 24 percent	8,950	66	1,564	2,767	2,689	1,801	63
25 percent to 74 percent	1,285	25	191	390	423	248	8
75 percent or more	578	-	65	150	225	137	1
Don't know.....	294	4	32	64	98	68	27
No	29,173	261	4,389	6,678	9,441	8,144	259
Don't know.....	1,801	34	309	354	648	444	12
Not specified.....	170	-	10	5	20	129	6
Subcontractor to defense agencies:							
Yes: Percent of products shipped.....	16,971	172	3,248	5,273	5,205	2,932	141
1 percent to 24 percent	11,232	141	2,187	3,614	3,119	2,055	116
25 percent to 74 percent	3,220	24	638	998	1,039	512	8
75 percent or more	1,295	3	291	338	570	83	11
Don't know.....	1,223	4	132	323	476	282	6
No	14,929	120	1,866	3,059	4,795	5,011	79
Don't know.....	10,057	98	1,387	2,058	3,504	2,860	151
Not specified.....	294	-	61	19	40	169	6
Foreign owned ¹ :							
Yes	3,349	55	695	1,050	864	658	28
No	37,340	333	5,557	8,988	12,207	9,942	312
Don't know.....	1,142	2	227	321	371	214	6
Not specified.....	420	-	82	49	101	157	31

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 3-11. Anticipated Cost to Acquire Technologically Advanced Fabrication and Machining Equipment and Software over the Next 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	4,336	3,628	581	62	28	4,624	93
35, Industrial Machinery and Equipment	14,037	4,389	5,087	1,011	104	86	3,252	107
36, Electronic and Other Electric Equipment	7,004	2,461	1,719	555	135	117	1,957	60
37, Transportation Equipment	4,003	1,083	930	328	104	74	1,451	33
38, Instruments and Related Products	3,854	1,337	1,029	240	47	18	1,141	41
Age of plant:								
Less than 5 years	6,005	1,956	1,821	282	24	15	1,858	49
5 years to 14 years	13,803	4,847	3,805	730	74	87	4,143	118
15 years to 29 years	12,685	3,944	3,968	887	186	82	3,528	89
30 years or more	9,424	2,830	2,775	816	161	138	2,627	78
Not specified	334	30	24	1	8	1	270	-
Number of employees:								
Less than 20	4,955	1,691	760	16	-	-	2,420	69
20 to 99	24,899	9,021	7,207	562	15	5	7,920	170
100 to 499	10,144	2,706	3,822	1,491	185	51	1,803	87
500 to 999	1,252	130	405	408	130	78	99	2
1,000 or more	801	50	158	237	117	188	44	6
Not specified	199	8	41	2	7	1	140	-
Unionized plants:								
Yes	7,842	2,311	1,999	875	145	145	2,308	58
Contract in effect:								
Yes	7,587	2,207	1,955	861	141	142	2,222	58
No	256	103	44	14	4	4	87	-
No	34,244	11,272	10,354	1,836	300	178	10,029	275
Not specified	165	24	40	4	8	-	88	-
Percentage of products exported:								
None	12,099	3,772	3,040	335	30	29	4,839	53
Less than 10 percent	19,125	6,338	5,894	1,358	216	119	5,013	187
10 percent to 19 percent	5,653	1,847	1,887	526	86	61	1,226	20
20 percent to 49 percent	3,925	1,240	1,160	386	94	81	916	49
50 percent or more	967	274	316	85	17	28	246	1
Not specified	481	135	96	26	10	6	185	23
Value of goods and services:								
Less than \$750,000	2,078	586	207	10	-	-	1,230	45
\$750,000 to less than \$1 million	1,917	795	362	-	-	-	738	22
\$1 million to less than \$5 million	17,806	6,374	5,142	273	-	5	5,863	151
\$5 million to less than \$10 million	7,853	2,890	2,399	321	12	1	2,207	23
\$10 million to less than \$25 million	6,464	1,844	2,422	710	82	12	1,340	53
\$25 million to less than \$50 million	2,827	641	1,043	581	76	23	444	18
\$50 million to less than \$100 million	1,467	239	470	396	110	57	188	7
\$100 million or more	1,283	90	290	400	163	221	112	6
Not specified	556	148	58	25	10	4	303	8
Products made to military specifications:								
Yes	16,650	5,232	5,991	1,254	210	158	3,652	154
No	22,010	7,190	5,473	1,287	207	145	7,561	147
Don't know	3,350	1,157	898	173	30	19	1,042	33
Not specified	241	29	31	2	7	1	172	-

See footnotes at end of table.

Table 3-11. Anticipated Cost to Acquire Technologically Advanced Fabrication and Machining Equipment and Software over the Next 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped . . .	11,107	3,912	3,353	877	114	121	2,654	75
1 percent to 24 percent.	8,950	3,151	2,760	711	75	97	2,095	60
25 percent to 74 percent.	1,285	504	376	100	17	7	268	12
75 percent or more.	578	179	171	43	17	10	154	4
Don't know.	294	77	45	22	5	6	137	-
No	29,173	9,185	8,474	1,716	295	185	9,090	228
Don't know.	1,801	506	543	122	37	18	553	24
Not specified	170	4	23	1	7	-	129	6
Subcontractor to defense agencies:								
Yes: Percent of products shipped . . .	16,971	5,366	6,259	1,384	209	153	3,469	130
1 percent to 24 percent.	11,232	3,471	4,123	976	129	112	2,320	101
25 percent to 74 percent.	3,220	994	1,293	223	44	22	622	23
75 percent or more.	1,295	437	532	108	17	10	183	7
Don't know.	1,223	465	311	76	18	9	344	-
No	14,929	4,889	3,522	691	146	104	5,483	93
Don't know.	10,057	3,300	2,550	630	90	66	3,317	104
Not specified	294	51	62	11	8	-	157	6
Foreign owned ¹ :								
Yes.	3,349	931	1,083	415	98	65	736	20
No	37,340	12,288	10,875	2,099	308	220	11,268	282
Don't know.	1,142	285	342	180	35	35	260	5
Not specified	420	102	93	22	11	3	161	26

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Chapter 4. Materials Handling

Materials Handling includes the following technologies:

- Automatic storage and retrieval system (AS/RS)
- Automatic guided vehicle system (AGVS)

Of the four technology groups, materials handling equipment appears to have the lowest usage rate. Approximately 83 percent of plants classified in each of the five SIC major groups reported that materials handling equipment was not applicable to operations or was used in less than 10 percent of operations. The dependency of plant operations on materials handling equipment is expected to increase slightly over the next 3 years. The number of plants reporting usage of materials handling equipment in 10 to 24 percent of operations is expected to increase from 7 percent (2,908) to 11 percent (4,555).

The majority of plants with fewer than 1,000 employees indicated that they had invested less than \$100,000 in this type of equipment over the past 3 years. Those plants having 1,000 or more employees had a tendency to invest slightly higher amounts (between \$100,000 and \$1 million).

Of those plants that did report using materials handling equipment, it generally took less than 3 months to install the equipment and have it fully operational. Plants with 1,000 or more employees or having value of shipments of \$100 million or more often took 3 to 6 months until full operation.

Over 50 percent of plants in each of the industries indicated that training and education costs related to materials handling equipment were not applicable to their operations. Plants with 1,000 or more employees or \$100

million or more in shipments reported marginal increases in training costs, compared with those with fewer than 1,000 employees or having shipments under \$100 million, who generally reported no change. Costs incurred over the past 3 years for education and training were less than \$10,000 for the majority of plants reporting.

Overall cost and financial justification were the most commonly reported problems in acquiring materials handling equipment over the past 3 years.

An average of 51 percent of plants in each of the five industries reported future acquisitions of materials handling equipment not applicable to operations. An average of 30 percent of plants classified in each of these industries are considering acquiring additional equipment, but have no firm plans to do so. Of those plants that are anticipating additional acquisitions, 35 percent (14,881) anticipate costs to be under \$100,000. Barriers to future acquisitions include equipment cost, software cost, and lack of benefits.

An average of 69 percent of plants in each of the five industries reported that benefits derived from the use of materials handling equipment were not applicable to their operations. Of those that did report benefits, labor cost reduction was most often cited. Increased flexibility was the second most frequently reported benefit for plants classified in SIC major groups 34 (Fabricated Metal Products), 35 (Industrial Machinery and Equipment), and 36 (Electronic and Other Electric Equipment), compared with inventory reduction, which was the second most reported benefit for plants classified in SIC major groups 37 (Transportation Equipment) and 38 (Instruments and Related Products).

Table 4-1. Percentage of Operations Dependent on Technologically Advanced Materials Handling Equipment and Software by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	5,585	762	334	241	164	6,165	103
35, Industrial Machinery and Equipment	14,037	6,087	1,011	337	353	265	5,860	123
36, Electronic and Other Electric Equipment	7,004	3,202	560	348	237	271	2,332	53
37, Transportation Equipment	4,003	1,658	247	148	75	131	1,698	47
38, Instruments and Related Products	3,854	1,634	328	174	128	167	1,394	30
Age of plant:								
Less than 5 years	6,005	2,528	460	196	153	191	2,436	41
5 years to 14 years	13,803	5,756	940	399	346	318	5,934	109
15 years to 29 years	12,685	5,476	880	443	359	272	5,129	125
30 years or more	9,424	4,374	629	296	176	209	3,661	80
Not specified	334	33	-	6	-	7	287	-
Number of employees:								
Less than 20	4,955	1,526	161	34	15	30	3,137	52
20 to 99	24,899	10,691	1,410	559	580	453	10,977	229
100 to 499	10,144	5,017	990	534	275	348	2,922	58
500 to 999	1,252	581	189	101	88	85	200	8
1,000 or more	801	301	157	108	76	73	78	8
Not specified	199	52	1	4	-	9	133	-
Unionized plants:								
Yes	7,842	3,596	566	360	179	233	2,858	49
Contract in effect:								
Yes	7,587	3,470	544	359	179	233	2,752	49
No	256	126	22	1	-	-	106	-
Not specified	34,244	14,529	2,341	975	853	754	14,485	306
Percentage of products exported:								
None	12,099	4,380	559	256	168	171	6,410	154
Less than 10 percent	19,125	8,730	1,312	495	452	399	7,631	107
10 percent to 19 percent	5,653	2,671	499	280	217	202	1,744	40
20 percent to 49 percent	3,925	1,738	438	245	156	172	1,131	44
50 percent or more	967	478	87	58	32	42	260	10
Not specified	481	169	14	6	9	11	271	1
Value of goods and services:								
Less than \$750,000	2,078	570	67	21	10	52	1,337	21
\$750,000 to less than \$1 million	1,917	665	81	18	15	32	1,073	33
\$1 million to less than \$5 million	17,806	7,303	872	351	316	237	8,551	176
\$5 million to less than \$10 million	7,853	3,739	587	229	194	169	2,899	36
\$10 million to less than \$25 million	6,464	3,234	535	248	229	199	1,974	45
\$25 million to less than \$50 million	2,827	1,342	362	171	93	110	719	29
\$50 million to less than \$100 million	1,467	653	173	125	63	92	354	7
\$100 million or more	1,283	537	221	158	108	101	150	7
Not specified	556	125	9	19	6	6	390	1
Products made to military specifications:								
Yes	16,650	7,436	1,304	631	452	479	6,255	94
No	22,010	9,382	1,363	606	501	438	9,516	203
Don't know	3,350	1,304	242	87	81	76	1,500	59
Not specified	241	45	-	15	-	5	176	-

See footnotes at end of table.

Table 4-1. **Percentage of Operations Dependent on Technologically Advanced Materials Handling Equipment and Software by Plant Characteristic—Continued**

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped . . .	11,107	5,099	834	453	386	468	3,795	72
1 percent to 24 percent	8,950	4,227	695	336	299	315	3,024	53
25 percent to 74 percent	1,285	550	93	73	32	92	430	16
75 percent or more	578	220	44	28	39	54	191	3
Don't know	294	101	3	16	17	7	151	-
No	29,173	12,383	1,940	811	607	474	12,699	260
Don't know	1,801	670	134	67	41	53	811	25
Not specified	170	15	-	9	-	4	142	-
Subcontractor to defense agencies:								
Yes: Percent of products shipped . . .	16,971	7,782	1,294	618	499	481	6,191	106
1 percent to 24 percent	11,232	5,303	777	356	312	233	4,187	64
25 percent to 74 percent	3,220	1,316	331	172	109	155	1,105	35
75 percent or more	1,295	647	148	43	49	46	356	6
Don't know	1,223	516	38	48	30	47	543	1
No	14,929	6,114	954	425	363	259	6,673	140
Don't know	10,057	4,221	660	285	172	253	4,356	111
Not specified	294	50	-	11	-	5	228	-
Foreign owned ¹ :								
Yes	3,349	1,406	366	180	139	124	1,107	27
No	37,340	16,112	2,410	1,080	841	798	15,780	318
Don't know	1,142	522	124	63	32	69	320	11
Not specified	420	127	8	16	22	8	239	-

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 4-2. Total Investment in Technologically Advanced Materials Handling Equipment and Software over the Last 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	5,991	438	60	4	6	6,645	209
35, Industrial Machinery and Equipment	14,037	6,726	539	62	14	9	6,527	160
36, Electronic and Other Electric Equipment	7,004	3,806	462	75	26	20	2,523	93
37, Transportation Equipment	4,003	1,796	233	54	11	20	1,847	42
38, Instruments and Related Products	3,854	1,910	296	48	6	12	1,531	50
Age of plant:								
Less than 5 years	6,005	2,964	293	47	5	6	2,617	73
5 years to 14 years	13,803	6,562	475	41	18	14	6,542	152
15 years to 29 years	12,685	5,983	752	82	16	19	5,672	162
30 years or more	9,424	4,640	447	127	22	27	4,001	161
Not specified	334	81	2	1	1	-	241	7
Number of employees:								
Less than 20	4,955	1,650	28	-	-	-	3,197	81
20 to 99	24,899	11,749	613	39	-	-	12,150	348
100 to 499	10,144	5,859	819	56	3	11	3,288	107
500 to 999	1,252	652	251	84	24	8	223	10
1,000 or more	801	243	254	119	33	47	99	6
Not specified	199	76	4	1	-	-	116	2
Unionized plants:								
Yes	7,842	3,996	476	144	24	32	3,094	76
Contract in effect:								
Yes	7,587	3,897	462	141	24	32	2,956	76
No	256	99	15	3	-	-	138	-
No	34,244	16,182	1,482	155	37	32	15,880	476
Not specified	165	52	11	-	-	1	99	2
Percentage of products exported:								
None	12,099	4,582	271	29	2	4	6,934	278
Less than 10 percent	19,125	9,671	827	133	19	23	8,292	160
10 percent to 19 percent	5,653	3,132	404	65	20	16	1,976	40
20 percent to 49 percent	3,925	2,128	349	54	18	12	1,313	51
50 percent or more	967	520	99	17	1	9	310	11
Not specified	481	198	18	1	-	1	248	15
Value of goods and services:								
Less than \$750,000	2,078	617	28	-	-	-	1,409	23
\$750,000 to less than \$1 million	1,917	766	7	-	-	-	1,061	84
\$1 million to less than \$5 million	17,806	7,972	269	16	-	-	9,312	237
\$5 million to less than \$10 million	7,853	4,108	245	24	-	1	3,370	103
\$10 million to less than \$25 million	6,464	3,686	484	11	5	-	2,224	54
\$25 million to less than \$50 million	2,827	1,675	316	36	2	4	764	31
\$50 million to less than \$100 million	1,467	777	253	52	7	9	359	9
\$100 million or more	1,283	489	360	156	45	50	176	7
Not specified	556	139	6	4	1	1	398	7
Products made to military specifications:								
Yes	16,650	8,451	938	141	18	30	6,912	161
No	22,010	10,293	904	134	37	31	10,288	323
Don't know	3,350	1,422	124	24	6	4	1,702	69
Not specified	241	64	3	-	-	-	171	2

See footnotes at end of table.

Table 4-2. Total Investment in Technologically Advanced Materials Handling Equipment and Software over the Last 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped	11,107	5,779	743	129	16	30	4,311	98
1 percent to 24 percent	8,950	4,804	544	77	8	18	3,441	59
25 percent to 74 percent	1,285	608	99	24	1	3	528	22
75 percent or more	578	274	67	24	4	8	184	18
Don't know	294	94	34	4	2	1	159	-
No.	29,173	13,661	1,105	155	38	33	13,758	424
Don't know	1,801	749	120	15	7	2	879	30
Not specified	170	42	1	-	-	-	125	2
Subcontractor to defense agencies:								
Yes: Percent of products shipped	16,971	8,723	997	122	22	35	6,929	143
1 percent to 24 percent	11,232	5,789	533	86	16	25	4,701	82
25 percent to 74 percent	3,220	1,669	261	19	1	5	1,232	33
75 percent or more	1,295	729	135	11	1	2	416	1
Don't know	1,223	536	68	5	4	2	580	26
No.	14,929	6,752	535	100	26	18	7,257	239
Don't know	10,057	4,666	435	75	12	12	4,694	163
Not specified	294	88	2	2	-	-	192	10
Foreign owned ¹ :								
Yes	3,349	1,667	324	68	14	12	1,238	27
No.	37,340	17,804	1,476	213	42	47	17,236	522
Don't know	1,142	589	156	13	5	5	371	3
Not specified	420	169	13	5	-	1	228	2

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 4-3. Average Length of Time from Placement of Order to Full Operation of Technologically Advanced Materials Handling Equipment and Software by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than 3 months (B)	3 months to less than 6 months (C)	6 months to less than 1 year (D)	1 year to less than 2 years (E)	2 years to less than 3 years (F)	3 years or more (G)	Not applicable (H)	Not specified (I)
Major Group:									
34, Fabricated Metal Products	13,353	4,241	782	215	16	1	7	7,839	251
35, Industrial Machinery and Equipment.....	14,037	4,311	837	312	69	37	18	8,111	342
36, Electronic and Other Electric Equipment...	7,004	2,427	674	255	55	6	28	3,423	135
37, Transportation Equipment.....	4,003	1,094	333	193	77	8	5	2,232	62
38, Instruments and Related Products	3,854	1,117	379	148	51	4	13	2,055	88
Age of plant:									
Less than 5 years	6,005	2,018	444	113	15	-	1	3,245	169
5 years to 14 years.....	13,803	4,380	886	258	69	31	44	7,899	237
15 years to 29 years.....	12,685	3,913	987	367	72	6	4	7,071	266
30 years or more.....	9,424	2,831	683	375	112	19	22	5,180	203
Not specified	334	47	5	11	-	-	-	266	5
Number of employees:									
Less than 20	4,955	1,093	160	5	-	23	-	3,532	143
20 to 99.....	24,899	8,164	1,161	319	72	6	55	14,606	517
100 to 499	10,144	3,429	1,188	441	66	16	11	4,806	188
500 to 999	1,252	333	283	163	39	7	3	405	19
1,000 or more.....	801	124	199	183	91	3	3	184	13
Not specified	199	45	15	12	-	-	-	127	-
Unionized plants:									
Yes.....	7,842	2,179	848	372	111	5	19	4,194	114
Contract in effect:									
Yes.....	7,587	2,106	831	368	110	5	19	4,038	110
No.....	256	74	17	4	1	-	-	156	4
No.....	34,244	10,961	2,151	750	156	50	53	19,359	764
Not specified	165	48	6	1	1	-	-	107	1
Percentage of products exported:									
None	12,099	3,335	456	192	23	3	29	7,723	337
Less than 10 percent.....	19,125	6,110	1,329	460	118	45	30	10,695	339
10 percent to 19 percent.....	5,653	1,970	693	238	44	4	7	2,598	98
20 percent to 49 percent.....	3,925	1,301	430	175	68	4	5	1,865	78
50 percent or more.....	967	369	62	56	12	-	1	452	15
Not specified	481	104	36	2	1	-	-	327	12
Value of goods and services:									
Less than \$750,000	2,078	414	121	-	1	-	-	1,470	72
\$750,000 to less than \$1 million	1,917	613	49	6	7	-	14	1,099	130
\$1 million to less than \$5 million	17,806	5,641	615	139	36	29	16	11,017	314
\$5 million to less than \$10 million	7,853	2,623	522	175	41	-	22	4,294	175
\$10 million to less than \$25 million.....	6,464	2,235	610	229	36	10	11	3,242	92
\$25 million to less than \$50 million.....	2,827	951	471	169	21	3	2	1,156	54
\$50 million to less than \$100 million.....	1,467	364	301	134	24	8	1	625	9
\$100 million or more.....	1,283	261	303	267	100	5	4	323	21
Not specified	556	87	13	4	2	-	1	436	12
Products made to military specifications:									
Yes.....	16,650	5,666	1,355	470	141	43	37	8,656	283
No.....	22,010	6,588	1,480	573	105	13	33	12,716	501
Don't know	3,350	882	164	78	22	-	1	2,109	95
Not specified	241	53	7	2	-	-	-	179	-

See footnotes at end of table.

Table 4-3. Average Length of Time from Placement of Order to Full Operation of Technologically Advanced Materials Handling Equipment and Software by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than 3 months (B)	3 months to less than 6 months (C)	6 months to less than 1 year (D)	1 year to less than 2 years (E)	2 years to less than 3 years (F)	3 years or more (G)	Not applicable (H)	Not specified (I)
Prime contractor to defense agencies:									
Yes: Percent of products shipped	11,107	3,841	1,030	391	134	41	27	5,489	154
1 percent to 24 percent	8,950	3,246	756	268	81	30	22	4,448	98
25 percent to 74 percent	1,285	422	138	69	10	11	2	594	39
75 percent or more	578	119	104	49	40	-	2	248	17
Don't know	294	54	33	6	3	-	-	198	-
No	29,173	8,855	1,845	665	109	15	44	16,999	643
Don't know	1,801	457	126	67	25	-	1	1,042	82
Not specified	170	36	4	-	-	-	-	130	-
Subcontractor to defense agencies:									
Yes: Percent of products shipped	16,971	5,935	1,364	461	109	42	36	8,714	310
1 percent to 24 percent	11,232	3,947	893	287	75	8	34	5,825	162
25 percent to 74 percent	3,220	1,134	320	77	23	30	1	1,534	101
75 percent or more	1,295	533	90	67	5	4	1	578	18
Don't know	1,223	321	60	30	5	-	-	777	29
No	14,929	4,484	982	413	71	8	30	8,621	320
Don't know	10,057	2,742	647	249	86	6	6	6,072	249
Not specified	294	28	11	-	2	-	-	253	-
Foreign owned ¹ :									
Yes	3,349	970	413	203	64	1	2	1,652	44
No	37,340	11,753	2,445	840	181	54	69	21,168	828
Don't know	1,142	372	126	72	20	-	-	545	7
Not specified	420	94	22	8	2	-	-	295	-

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 4-4. Impact of Technologically Advanced Materials Handling Equipment and Software on Education and Training Costs by Plant Characteristic

Plant characteristic	Number of plants (A)	Increased significantly (B)	Increased moderately (C)	Increased marginally (D)	No change (E)	Decreased (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	186	612	1,376	2,340	17	8,644	178
35, Industrial Machinery and Equipment	14,037	341	604	1,220	2,827	27	8,888	130
36, Electronic and Other Electric Equipment	7,004	292	530	868	1,622	61	3,545	85
37, Transportation Equipment	4,003	130	248	399	747	11	2,401	67
38, Instruments and Related Products	3,854	123	256	487	828	30	2,082	47
Age of plant:								
Less than 5 years	6,005	140	317	731	1,133	23	3,611	51
5 years to 14 years	13,803	307	786	1,329	2,650	63	8,538	130
15 years to 29 years	12,685	306	674	1,252	2,639	25	7,599	189
30 years or more	9,424	319	456	1,021	1,921	35	5,544	129
Not specified	334	1	17	17	22	-	267	9
Number of employees:								
Less than 20	4,955	78	83	153	743	11	3,817	70
20 to 99	24,899	449	966	2,168	4,839	97	16,074	307
100 to 499	10,144	385	858	1,502	2,296	32	4,958	112
500 to 999	1,252	79	161	277	314	4	404	14
1,000 or more	801	81	167	226	152	2	168	5
Not specified	199	1	15	24	21	-	138	-
Unionized plants:								
Yes	7,842	217	538	933	1,523	10	4,564	56
Contract in effect:								
Yes	7,587	215	529	898	1,502	9	4,378	56
No	256	3	10	35	21	1	186	-
No	34,244	854	1,704	3,393	6,830	129	20,883	451
Not specified	165	1	8	25	12	6	112	1
Percentage of products exported:								
None	12,099	176	424	836	1,870	28	8,553	212
Less than 10 percent	19,125	493	990	1,889	4,017	82	11,423	232
10 percent to 19 percent	5,653	220	414	803	1,248	10	2,918	41
20 percent to 49 percent	3,925	130	330	613	999	22	1,808	23
50 percent or more	967	36	69	156	194	4	508	-
Not specified	481	18	23	54	36	-	349	-
Value of goods and services:								
Less than \$750,000	2,078	60	39	63	272	-	1,605	38
\$750,000 to less than \$1 million	1,917	20	65	80	308	7	1,382	56
\$1 million to less than \$5 million	17,806	301	560	1,325	3,343	60	12,011	206
\$5 million to less than \$10 million	7,853	165	395	906	1,648	37	4,627	74
\$10 million to less than \$25 million	6,464	224	453	889	1,454	20	3,368	56
\$25 million to less than \$50 million	2,827	110	320	479	665	11	1,193	49
\$50 million to less than \$100 million	1,467	78	176	228	365	6	604	10
\$100 million or more	1,283	109	214	340	271	5	339	5
Not specified	556	6	28	40	37	-	431	15
Products made to military specifications:								
Yes	16,650	426	1,004	2,004	3,413	89	9,532	182
No	22,010	582	1,039	2,031	4,302	47	13,767	240
Don't know	3,350	65	199	290	636	9	2,065	86
Not specified	241	-	8	25	14	-	195	-

See footnotes at end of table.

Table 4-4. **Impact of Technologically Advanced Materials Handling Equipment and Software on Education and Training Costs by Plant Characteristic—Continued**

Plant characteristic	Number of plants (A)	Increased significantly (B)	Increased moderately (C)	Increased marginally (D)	No change (E)	Decreased (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped	11,107	300	837	1,401	2,428	67	5,963	112
1 percent to 24 percent	8,950	242	653	1,099	2,029	49	4,801	77
25 percent to 74 percent	1,285	32	95	148	283	8	701	19
75 percent or more	578	22	76	116	77	7	266	15
Don't know	294	5	12	38	39	4	195	1
No	29,173	732	1,321	2,758	5,544	73	18,434	312
Don't know	1,801	41	85	169	379	6	1,036	84
Not specified	170	-	7	22	14	-	127	-
Subcontractor to defense agencies:								
Yes: Percent of products shipped	16,971	429	1,002	2,018	3,688	66	9,626	141
1 percent to 24 percent	11,232	226	578	1,339	2,539	41	6,435	74
25 percent to 74 percent	3,220	130	231	468	668	9	1,684	30
75 percent or more	1,295	30	141	128	229	15	730	22
Don't know	1,223	42	52	83	253	1	777	14
No	14,929	396	703	1,402	2,714	34	9,520	160
Don't know	10,057	246	530	913	1,923	46	6,191	207
Not specified	294	1	15	17	40	-	222	-
Foreign owned ¹ :								
Yes	3,349	138	254	440	736	5	1,753	23
No	37,340	865	1,862	3,710	7,280	130	23,011	482
Don't know	1,142	65	107	153	284	11	521	1
Not specified	420	4	27	47	65	-	275	1

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 4-5. Cost of Education and Training Related to the Use of Technologically Advanced Materials Handling Equipment and Software over the Last 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than \$10,000 (B)	\$10,000 to less than \$50,000 (C)	\$50,000 to less than \$100,000 (D)	\$100,000 to less than \$250,000 (E)	\$250,000 to less than \$500,000 (F)	\$500,000 to less than \$1 million (G)	\$1 million to less than \$5 million (H)	\$5 million and over (I)	Not applicable (J)	Not specified (K)
Major Group:											
34, Fabricated Metal Products	13,353	4,286	403	121	18	1	-	2	7	8,236	279
35, Industrial Machinery and Equipment	14,037	4,318	525	160	53	12	5	2	3	8,619	338
36, Electronic and Other Electric Equipment	7,004	2,604	592	106	70	27	6	3	3	3,508	85
37, Transportation Equipment	4,003	1,250	241	57	43	15	3	5	3	2,306	79
38, Instruments and Related Products	3,854	1,306	289	76	28	10	7	6	2	2,040	90
Age of plant:											
Less than 5 years	6,005	2,010	327	49	17	7	2	6	7	3,448	131
5 years to 14 years	13,803	4,586	598	107	43	15	5	1	1	8,285	163
15 years to 29 years	12,685	3,940	667	203	80	22	7	4	4	7,414	344
30 years or more	9,424	3,179	444	160	71	22	7	7	5	5,308	221
Not specified	334	51	14	1	-	-	-	-	1	255	12
Number of employees:											
Less than 20	4,955	1,020	46	5	-	-	-	-	7	3,707	170
20 to 99	24,899	7,905	692	161	33	7	-	-	-	15,572	529
100 to 499	10,144	4,058	910	176	71	5	4	4	-	4,774	141
500 to 999	1,252	509	215	60	42	23	2	5	-	381	16
1,000 or more	801	223	174	107	64	30	16	11	11	157	8
Not specified	199	49	12	12	-	-	-	-	-	120	7
Unionized plants:											
Yes	7,842	2,619	446	166	82	23	10	9	6	4,356	126
Contract in effect:											
Yes	7,587	2,559	435	166	81	21	10	9	6	4,175	125
No	256	60	11	-	2	2	-	-	-	180	1
No	34,244	11,099	1,591	354	128	42	11	10	12	20,250	745
Not specified	165	47	13	-	-	1	-	-	-	103	1
Percentage of products exported:											
None	12,099	3,218	214	54	18	5	2	2	2	8,241	342
Less than 10 percent	19,125	6,448	943	226	81	13	4	5	8	11,024	372
10 percent to 19 percent	5,653	2,125	460	118	38	16	5	9	4	2,794	84
20 percent to 49 percent	3,925	1,477	331	91	55	27	8	-	4	1,887	47
50 percent or more	967	342	94	30	10	4	2	2	-	481	1
Not specified	481	155	7	-	9	-	-	1	-	282	26
Value of goods and services:											
Less than \$750,000	2,078	499	5	13	-	-	-	-	-	1,511	49
\$750,000 to less than \$1 million	1,917	453	37	1	-	-	-	-	-	1,318	109
\$1 million to less than \$5 million	17,806	5,218	429	77	18	-	-	-	7	11,672	384
\$5 million to less than \$10 million	7,853	2,628	338	91	10	7	-	-	-	4,636	142
\$10 million to less than \$25 million	6,464	2,635	459	73	34	3	-	4	-	3,170	86
\$25 million to less than \$50 million	2,827	1,235	319	62	41	2	-	4	-	1,103	62
\$50 million to less than \$100 million	1,467	560	195	75	33	6	1	-	-	580	16
\$100 million or more	1,283	438	247	126	74	46	19	12	11	301	9
Not specified	556	98	21	2	-	1	1	-	-	418	14

See footnotes at end of table.

Table 4-5. Cost of Education and Training Related to the Use of Technologically Advanced Materials Handling Equipment and Software over the Last 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than \$10,000 (B)	\$10,000 to less than \$50,000 (C)	\$50,000 to less than \$100,000 (D)	\$100,000 to less than \$250,000 (E)	\$250,000 to less than \$500,000 (F)	\$500,000 to less than \$1 million (G)	\$1 million to less than \$5 million (H)	\$5 million and over (I)	Not applicable (J)	Not specified (K)
Products made to military specifications:											
Yes	16,650	5,643	893	277	130	39	16	10	4	9,361	278
No	22,010	7,028	1,010	205	72	23	5	6	14	13,110	536
Don't know.	3,350	1,036	142	38	9	3	-	3	1	2,060	58
Not specified	241	58	5	-	-	-	-	-	-	178	-
Prime contractor to defense agencies:											
Yes: Percent of products shipped	11,107	4,124	675	209	104	30	14	8	6	5,706	231
1 percent to											
24 percent	8,950	3,390	497	150	81	16	9	3	3	4,630	171
25 percent to											
74 percent	1,285	471	83	34	12	6	-	-	1	627	51
75 percent or more ...	578	194	78	21	9	6	5	4	1	252	8
Don't know.	294	68	18	5	2	2	-	-	1	197	1
No	29,173	9,068	1,258	276	97	30	6	10	5	17,840	582
Don't know.	1,801	533	114	35	9	5	1	1	7	1,036	59
Not specified	170	40	3	-	-	-	-	-	-	127	-
Subcontractor to defense agencies:											
Yes: Percent of products shipped	16,971	5,928	889	276	116	45	11	11	6	9,447	240
1 percent to											
24 percent	11,232	3,888	549	164	59	31	10	6	3	6,390	131
25 percent to											
74 percent	3,220	1,263	200	57	37	9	-	2	3	1,582	67
75 percent or more ...	1,295	443	75	43	9	2	-	2	-	715	6
Don't know.	1,223	334	65	13	11	2	1	-	-	761	36
No	14,929	4,543	677	136	52	17	2	7	3	9,150	341
Don't know.	10,057	3,225	472	108	41	4	8	1	9	5,922	267
Not specified	294	68	11	-	1	-	-	-	-	190	23
Foreign owned ¹ :											
Yes	3,349	1,235	284	66	30	9	1	-	1	1,699	22
No	37,340	11,986	1,581	409	169	53	18	17	16	22,283	808
Don't know.	1,142	397	165	34	9	4	2	2	1	514	13
Not specified	420	147	19	10	2	-	-	-	-	212	29

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 4-6. Most Significant Problems Encountered over the Last 3 Years in the Acquisition or Use of Technologically Advanced Materials Handling Equipment and Software by Plant Characteristic

Plant characteristic	Overall cost (A)	Cost of education and training (B)	Worker resistance (C)	Time to develop software (D)	Cost to develop software (E)	Increased maintenance expenses (F)	Need for market expansion (G)	Lack of financial justification (H)	Lack of technical support from vendors (I)	Other (J)
Major Group:										
34, Fabricated Metal Products .	1,208	325	268	364	301	178	155	808	254	172
35, Industrial Machinery and Equipment.....	975	442	260	225	260	206	181	884	324	214
36, Electronic and Other Electric Equipment.....	851	378	163	242	201	157	70	491	161	106
37, Transportation Equipment..	397	159	102	156	131	74	46	287	89	37
38, Instruments and Related Products	420	149	78	132	148	48	26	262	81	49
Age of plant:										
Less than 5 years	451	180	58	134	181	73	40	334	147	108
5 years to 14 years.....	1,025	450	278	341	258	185	106	665	294	135
15 years to 29 years.....	1,257	451	266	374	286	177	200	892	286	192
30 years or more.....	1,101	358	250	268	316	227	132	838	172	137
Not specified.....	15	15	20	2	-	-	-	2	10	7
Number of employees:										
Less than 20.....	227	106	80	67	61	45	25	115	22	57
20 to 99.....	1,948	695	349	445	501	252	235	1,452	497	264
100 to 499.....	1,225	514	297	409	308	195	172	836	281	177
500 to 999.....	213	68	63	87	74	69	28	168	60	36
1,000 or more.....	213	62	64	110	97	85	18	148	50	40
Not specified.....	24	11	20	1	-	17	-	12	-	4
Unionized plants:										
Yes.....	847	261	175	322	264	167	106	602	208	149
Contract in effect:										
Yes.....	839	253	174	289	258	167	106	585	208	147
No.....	8	8	1	33	6	-	-	17	-	2
No.....	2,995	1,187	694	793	776	496	372	2,111	701	425
Not specified.....	9	6	4	3	2	-	-	18	-	4
Percentage of products exported:										
None.....	758	238	158	163	226	108	100	716	166	165
Less than 10 percent	1,905	741	418	502	479	358	226	1,164	519	245
10 percent to 19 percent.....	565	221	137	209	173	93	84	471	115	70
20 percent to 49 percent.....	440	172	116	202	118	73	53	274	79	63
50 percent or more	138	64	40	43	43	28	5	84	30	32
Not specified.....	43	19	4	1	2	3	10	22	1	4
Value of goods and services:										
Less than \$750,000.....	131	5	16	13	37	28	23	52	6	-
\$750,000 to less than \$1 million.....	174	89	28	54	18	31	11	133	45	36
\$1 million to less than \$5 million.....	1,341	503	238	269	331	210	173	969	268	136
\$5 million to less than \$10 million.....	592	196	145	196	186	37	76	381	159	66
\$10 million to less than \$25 million.....	730	327	160	221	188	93	100	487	205	208
\$25 million to less than \$50 million.....	394	175	154	137	103	91	36	334	94	49
\$50 million to less than \$100 million.....	181	68	47	87	52	59	20	149	58	23
\$100 million or more	299	85	80	134	122	112	39	218	70	56
Not specified.....	8	5	4	7	3	3	-	7	5	5
Products made to military specifications:										
Yes.....	1,945	641	356	560	563	364	254	1,232	413	214
No.....	1,635	639	432	517	416	245	191	1,351	438	336
Don't know	264	168	81	42	62	54	33	139	57	21
Not specified.....	7	6	4	-	1	-	-	8	-	9

See footnotes at end of table.

Table 4-6. Most Significant Problems Encountered over the Last 3 Years in the Acquisition or Use of Technologically Advanced Materials Handling Equipment and Software by Plant Characteristic—Continued

Plant characteristic	Overall cost (A)	Cost of education and training (B)	Worker resistance (C)	Time to develop software (D)	Cost to develop software (E)	Increased maintenance expenses (F)	Need for market expansion (G)	Lack of financial justification (H)	Lack of technical support from vendors (I)	Other (J)
Prime contractor to defense agencies:										
Yes: Percent of products shipped	1,324	510	316	410	380	254	105	771	300	193
1 percent to 24 percent	1,096	391	253	312	292	199	72	612	245	172
25 percent to 74 percent	106	80	37	49	43	31	16	78	29	15
75 percent or more	92	30	16	47	42	16	10	66	25	5
Don't know	30	10	10	3	2	8	6	15	-	1
No	2,407	859	525	664	610	391	369	1,891	566	375
Don't know	118	82	28	45	52	18	5	65	41	7
Not specified	2	4	4	-	-	-	-	4	2	4
Subcontractor to defense agencies:										
Yes: Percent of products shipped	1,938	635	412	552	530	349	280	1,219	465	253
1 percent to 24 percent	1,196	383	238	361	335	154	140	709	296	175
25 percent to 74 percent	430	162	133	121	86	135	95	348	143	53
75 percent or more	198	41	22	63	94	38	23	98	15	13
Don't know	113	48	20	7	15	21	23	64	11	11
No	1,097	438	270	327	296	146	105	833	254	180
Don't know	797	378	187	221	214	168	93	677	170	142
Not specified	18	4	4	19	1	-	-	2	19	4
Foreign owned ¹ :										
Yes	450	132	74	161	158	81	62	318	105	60
No	3,231	1,233	707	905	835	522	409	2,277	759	505
Don't know	138	61	60	32	41	52	7	119	21	11
Not specified	31	28	31	21	7	9	-	18	25	4

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 4-7. Most Significant Anticipated Barriers to Acquisitions of Technologically Advanced Materials Handling Equipment and Software over the Next 3 Years by Plant Characteristic

Plant characteristic	Cost of equipment (A)	Cost of software (B)	Cost of education and training (C)	Lack of skilled work force (D)	Lack of benefits (E)	Union contract (F)	Lack of technological information (G)	Lack of management support (H)	Incompatibility with other equipment (I)	Lack of product marketability (J)	Lack of technical support from vendors (K)	Other (L)
Major Group:												
34, Fabricated Metal Products	3,439	1,662	965	539	1,880	138	348	428	428	266	230	510
35, Industrial Machinery and Equipment.....	3,011	1,272	947	684	1,653	83	207	413	289	177	194	562
36, Electronic and Other Electric Equipment	2,120	976	630	348	1,057	50	193	304	252	94	127	293
37, Transportation Equipment.....	1,226	574	315	234	693	35	121	234	106	107	80	184
38, Instruments and Related Products.....	1,056	577	323	146	561	27	66	200	70	42	38	139
Age of plant:												
Less than 5 years	1,462	728	404	170	725	28	124	182	206	53	51	204
5 years to 14 years.....	3,174	1,509	873	630	1,820	34	256	441	278	278	219	439
15 years to 29 years.....	3,270	1,528	1,028	635	1,811	99	341	504	353	213	264	492
30 years or more.....	2,891	1,250	849	517	1,470	171	214	443	308	142	131	554
Not specified	54	46	26	-	17	-	1	10	1	-	4	-
Number of employees:												
Less than 20	873	442	257	163	478	12	32	52	66	86	70	195
20 to 99.....	5,912	2,818	1,877	1,082	3,038	118	470	747	598	410	364	931
100 to 499	3,237	1,399	862	607	1,829	152	362	605	370	137	185	375
500 to 999	474	233	109	53	298	25	53	99	58	24	34	80
1,000 or more.....	339	157	71	45	191	26	15	65	42	29	16	88
Not specified	18	11	4	-	9	1	4	11	12	-	-	20
Unionized plants:												
Yes.....	2,525	920	730	466	1,482	322	252	467	321	182	117	379
Contract in effect:												
Yes.....	2,459	915	674	451	1,462	312	249	459	288	181	117	339
No.....	66	5	56	15	20	9	3	8	33	1	-	40
No.....	8,302	4,129	2,446	1,479	4,358	11	684	1,107	824	495	553	1,309
Not specified	25	11	4	6	3	-	-	5	-	8	-	-
Percentage of products exported:												
None	2,466	1,161	781	446	1,351	39	164	280	301	283	178	550
Less than 10 percent	5,439	2,480	1,537	1,040	2,660	191	537	789	511	241	369	742
10 percent to 19 percent..	1,700	798	496	250	975	58	130	258	206	89	87	183
20 percent to 49 percent..	919	452	281	186	650	36	83	210	101	57	28	141
50 percent or more.....	272	138	70	26	183	8	22	33	20	4	5	67
Not specified	55	33	16	4	24	1	-	9	7	12	1	7
Value of goods and services:												
Less than \$750,000	315	194	138	65	137	-	8	22	26	34	53	82
\$750,000 to less than \$1 million.....	402	283	111	96	163	-	5	44	28	12	18	25
\$1 million to less than \$5 million.....	4,124	1,974	1,367	731	2,110	70	316	422	337	359	236	705
\$5 million to less than \$10 million.....	2,001	940	512	381	1,089	66	160	288	248	91	107	249
\$10 million to less than \$25 million.....	1,991	797	589	397	1,157	66	235	358	278	75	137	297
\$25 million to less than \$50 million.....	960	407	229	160	536	68	123	217	95	44	51	109
\$50 million to less than \$100 million	478	217	119	52	307	23	51	105	61	29	36	81
\$100 million or more.....	536	230	98	66	331	40	37	115	73	41	29	127
Not specified	46	18	19	4	11	-	1	9	1	1	3	12

See footnotes at end of table.

Table 4-7. Most Significant Anticipated Barriers to Acquisitions of Technologically Advanced Materials Handling Equipment and Software over the Next 3 Years by Plant Characteristic—Continued

Plant characteristic	Cost of equipment (A)	Cost of software (B)	Cost of education and training (C)	Lack of skilled work force (D)	Lack of benefits (E)	Union contract (F)	Lack of technological information (G)	Lack of management support (H)	Incompatibility with other equipment (I)	Lack of product marketability (J)	Lack of technical support from vendors (K)	Other (L)
Products made to military specifications:												
Yes.....	4,480	1,884	1,250	829	2,341	192	381	657	476	350	332	862
No.....	5,472	2,671	1,664	986	3,046	112	463	820	598	289	288	675
Don't know.....	877	496	255	136	436	29	80	97	66	47	49	139
Not specified.....	22	9	11	-	20	-	12	6	5	-	-	12
Prime contractor to defense agencies:												
Yes: Percent of products shipped.....	3,268	1,501	964	582	1,730	131	295	483	360	182	288	592
1 percent to 24 percent.....	2,692	1,193	780	511	1,394	112	228	391	300	139	226	439
25 percent to 74 percent.....	289	154	88	45	232	11	48	40	31	21	41	80
75 percent or more.....	215	116	75	25	72	6	14	22	16	20	20	66
Don't know.....	73	38	21	1	31	1	5	30	13	2	1	5
No.....	7,153	3,310	2,031	1,266	3,908	179	620	1,000	758	485	352	1,032
Don't know.....	416	241	175	103	205	23	21	91	27	19	30	66
Not specified.....	14	8	10	-	-	-	-	5	-	-	-	-
Subcontractor to defense agencies:												
Yes: Percent of products shipped.....	4,688	2,088	1,283	796	2,500	126	404	675	480	292	346	881
1 percent to 24 percent.....	3,188	1,403	836	601	1,669	66	251	501	297	121	176	612
25 percent to 74 percent.....	841	406	233	121	448	37	99	87	118	115	127	190
75 percent or more.....	323	167	119	37	150	18	18	51	19	22	30	62
Don't know.....	336	113	95	37	233	5	35	36	46	35	14	19
No.....	3,531	1,686	1,117	687	1,948	70	324	531	357	253	199	524
Don't know.....	2,577	1,258	776	468	1,365	136	208	349	308	140	123	282
Not specified.....	56	28	4	-	30	-	1	24	-	-	1	1
Foreign owned ¹ :												
Yes.....	1,140	415	258	189	708	53	111	247	100	84	35	200
No.....	9,259	4,433	2,838	1,683	4,869	262	764	1,245	992	577	605	1,428
Don't know.....	370	152	70	74	231	17	59	78	52	24	28	60
Not specified.....	83	60	14	5	35	1	3	9	2	1	1	1

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 4-8. Benefits Derived from the Use of Technologically Advanced Materials Handling Equipment and Software by Plant Characteristic

Plant characteristic	Labor cost reduction (A)	Quality improvement (B)	Flexibility increase (C)	Setup time reductions (D)	Equipment utilization increase (E)	Inventory reduction (F)	Lead time reduction (G)	Marketing advantage (H)	Other (I)	Not applicable (J)
Major Group:										
34, Fabricated Metal Products .	2,095	1,214	1,039	466	590	1,064	713	483	280	9,756
35, Industrial Machinery and Equipment	2,002	1,462	1,081	457	516	1,352	993	398	161	10,241
36, Electronic and Other Electric Equipment	1,641	1,158	881	288	377	1,108	790	192	99	4,335
37, Transportation Equipment . .	683	397	370	91	244	532	291	118	86	2,815
38, Instruments and Related Products	825	509	444	122	120	659	446	74	55	2,489
Age of plant:										
Less than 5 years	1,179	798	643	151	182	688	479	148	122	4,023
5 years to 14 years	2,165	1,654	1,168	470	564	1,537	988	442	193	9,822
15 years to 29 years	2,010	1,369	1,085	409	518	1,412	1,037	397	184	9,006
30 years or more	1,856	886	911	373	579	1,058	715	256	171	6,534
Not specified	36	33	8	21	3	19	14	22	9	252
Number of employees:										
Less than 20	416	237	198	106	114	163	197	81	78	4,187
20 to 99	3,384	2,570	1,660	840	739	2,130	1,518	802	338	18,497
100 to 499	2,559	1,390	1,473	367	772	1,802	1,087	293	201	6,052
500 to 999	467	283	260	63	117	336	242	49	30	527
1,000 or more	404	252	218	46	98	277	183	19	22	232
Not specified	16	8	5	1	7	6	5	21	12	142
Unionized plants:										
Yes	1,640	862	823	315	500	995	638	170	180	5,258
Contract in effect:										
Yes	1,598	840	801	312	493	982	631	168	179	5,052
No	41	21	22	3	7	13	6	2	1	206
No	5,590	3,870	2,977	1,102	1,345	3,709	2,588	1,074	500	24,265
Not specified	16	8	14	6	1	11	7	21	-	113
Percentage of products exported:										
None	1,372	971	558	337	363	705	610	330	185	9,408
Less than 10 percent	3,335	2,145	1,845	626	951	2,165	1,297	614	333	13,422
10 percent to 19 percent	1,325	790	710	245	270	883	621	144	74	3,463
20 percent to 49 percent	929	691	522	177	215	783	581	124	75	2,343
50 percent or more	247	126	147	31	43	159	116	22	8	615
Not specified	39	16	33	7	5	20	7	31	6	385
Value of goods and services:										
Less than \$750,000	166	87	120	2	76	115	106	44	22	1,676
\$750,000 to less than \$1 million	285	160	50	96	22	112	140	26	37	1,506
\$1 million to less than \$5 million	2,170	1,748	985	590	427	1,117	886	464	244	13,824
\$5 million to less than \$10 million	1,250	758	768	234	324	933	533	313	98	5,500
\$10 million to less than \$25 million	1,444	858	773	198	448	1,031	636	222	166	4,034
\$25 million to less than \$50 million	812	455	481	138	248	620	417	94	43	1,475
\$50 million to less than \$100 million	464	268	267	79	139	352	217	37	30	733
\$100 million or more	599	389	330	74	157	407	287	44	41	425
Not specified	57	16	40	14	7	28	11	21	-	464
Products made to military specifications:										
Yes	3,241	2,131	1,659	590	802	1,984	1,381	629	261	11,261
No	3,416	2,205	1,819	689	881	2,422	1,622	525	345	15,821
Don't know	567	389	326	144	161	302	224	90	74	2,364
Not specified	22	13	10	-	2	7	5	21	-	191

See footnotes at end of table.

Table 4-8. Benefits Derived from the Use of Technologically Advanced Materials Handling Equipment and Software by Plant Characteristic—Continued

Plant characteristic	Labor cost reduction (A)	Quality improvement (B)	Flexibility increase (C)	Setup time reductions (D)	Equipment utilization increase (E)	Inventory reduction (F)	Lead time reduction (G)	Marketing advantage (H)	Other (I)	Not applicable (J)
Prime contractor to defense agencies:										
Yes: Percent of products shipped	2,352	1,501	1,210	464	567	1,618	1,119	390	189	7,207
1 percent to 24 percent.....	1,828	1,159	942	390	481	1,280	857	298	160	5,876
25 percent to 74 percent.....	292	175	164	51	40	183	175	43	12	812
75 percent or more.....	181	143	53	18	29	118	75	48	14	306
Don't know	52	24	50	5	17	37	12	1	3	213
No.....	4,530	3,038	2,437	884	1,161	2,912	2,031	816	448	21,042
Don't know	347	194	164	76	115	179	79	38	42	1,261
Not specified	17	7	4	-	3	6	4	21	-	127
Subcontractor to defense agencies:										
Yes: Percent of products shipped	3,367	2,235	1,690	657	700	1,993	1,533	697	252	11,334
1 percent to 24 percent.....	2,221	1,468	1,093	421	466	1,353	1,061	408	190	7,511
25 percent to 74 percent.....	740	420	375	123	121	436	301	145	42	2,064
75 percent or more.....	257	186	82	76	63	116	101	114	15	871
Don't know	149	161	140	37	50	88	71	29	5	888
No.....	2,239	1,449	1,295	397	664	1,702	1,012	347	180	10,785
Don't know	1,614	1,055	824	371	467	1,013	683	200	234	7,275
Not specified	27	1	5	-	16	7	5	21	15	242
Foreign owned ¹ :										
Yes.....	798	513	421	109	195	620	367	104	106	2,068
No.....	6,116	4,014	3,186	1,243	1,547	3,783	2,681	1,106	550	26,636
Don't know	301	178	190	41	90	284	152	32	24	620
Not specified	32	35	18	30	16	29	32	22	-	313

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 4-9. Percentage of Operations Anticipated to be Dependent on Technologically Advanced Materials Handling Equipment and Software in 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	4,036	1,397	621	332	311	6,437	219
35, Industrial Machinery and Equipment	14,037	4,171	1,300	591	457	396	6,790	330
36, Electronic and Other Electric Equipment	7,004	2,271	934	526	423	328	2,438	85
37, Transportation Equipment	4,003	1,321	378	239	145	152	1,709	59
38, Instruments and Related Products	3,854	1,235	546	247	216	168	1,386	57
Age of plant:								
Less than 5 years	6,005	1,757	711	395	323	216	2,527	76
5 years to 14 years	13,803	4,100	1,575	736	382	423	6,298	289
15 years to 29 years	12,685	3,885	1,351	564	576	411	5,696	202
30 years or more	9,424	3,234	900	526	292	300	3,991	180
Not specified	334	57	18	3	2	5	247	1
Number of employees:								
Less than 20	4,955	1,258	222	43	47	23	3,297	66
20 to 99	24,899	7,511	2,344	1,088	801	620	11,957	578
100 to 499	10,144	3,619	1,571	784	513	483	3,087	85
500 to 999	1,252	403	260	163	112	106	204	4
1,000 or more	801	199	147	144	100	118	84	9
Not specified	199	44	11	1	1	5	131	7
Unionized plants:								
Yes	7,842	2,749	853	490	335	238	3,073	105
Contract in effect:								
Yes	7,587	2,695	831	474	330	236	2,918	103
No	256	54	22	15	5	2	155	2
No	34,244	10,248	3,696	1,734	1,238	1,105	15,578	643
Not specified	165	37	5	-	1	12	109	1
Percentage of products exported:								
None	12,099	3,058	869	399	225	239	7,028	281
Less than 10 percent	19,125	6,498	2,089	926	706	641	7,966	298
10 percent to 19 percent	5,653	1,887	756	544	282	178	1,879	128
20 percent to 49 percent	3,925	1,228	589	278	293	230	1,288	20
50 percent or more	967	239	196	67	63	57	344	1
Not specified	481	123	56	10	6	11	254	21
Value of goods and services:								
Less than \$750,000	2,078	490	97	32	21	64	1,352	21
\$750,000 to less than \$1 million	1,917	525	114	45	23	8	1,110	92
\$1 million to less than \$5 million	17,806	5,266	1,421	649	411	379	9,254	426
\$5 million to less than \$10 million	7,853	2,580	892	398	330	231	3,312	110
\$10 million to less than \$25 million	6,464	2,376	886	454	340	250	2,103	55
\$25 million to less than \$50 million	2,827	928	563	263	187	128	738	20
\$50 million to less than \$100 million	1,467	453	275	154	116	118	345	6
\$100 million or more	1,283	331	258	220	141	167	156	10
Not specified	556	85	49	8	6	9	390	10
Products made to military specifications:								
Yes	16,650	5,511	1,971	947	685	580	6,652	303
No	22,010	6,575	2,212	1,065	793	601	10,373	391
Don't know	3,350	909	346	204	95	171	1,571	55
Not specified	241	39	26	8	1	4	164	-

See footnotes at end of table.

Table 4-9. Percentage of Operations Anticipated to be Dependent on Technologically Advanced Materials Handling Equipment and Software in 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped ...	11,107	3,753	1,407	721	528	446	4,118	134
1 percent to 24 percent	8,950	3,143	1,151	561	388	342	3,263	102
25 percent to 74 percent	1,285	379	133	99	82	59	520	15
75 percent or more	578	184	93	38	43	35	168	18
Don't know	294	48	30	24	15	10	167	-
No	29,173	8,799	2,905	1,396	984	825	13,723	541
Don't know	1,801	444	236	100	62	81	808	69
Not specified	170	37	7	6	-	4	110	6
Subcontractor to defense agencies:								
Yes: Percent of products shipped ...	16,971	5,284	2,118	1,014	708	664	6,939	244
1 percent to 24 percent	11,232	3,564	1,413	743	373	422	4,595	122
25 percent to 74 percent	3,220	960	463	136	181	149	1,257	75
75 percent or more	1,295	417	138	91	101	52	485	11
Don't know	1,223	343	104	44	54	40	602	37
No	14,929	4,577	1,365	717	556	364	7,142	208
Don't know	10,057	3,112	1,049	492	309	324	4,480	292
Not specified	294	61	23	1	1	4	199	6
Foreign owned ¹ :								
Yes	3,349	1,044	564	287	206	183	1,031	34
No	37,340	11,513	3,807	1,794	1,302	1,094	17,125	703
Don't know	1,142	344	148	130	64	72	380	3
Not specified	420	133	35	12	2	6	223	9

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 4-10. Plans to Acquire Technologically Advanced Materials Handling Equipment and Software over the Next 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Total replacement (75 percent or more) (B)	Major upgrade (25 percent to less than 75 percent) (C)	Minor upgrade (less than 25 percent) (D)	Under consideration, but no firm plans (E)	Not applicable (F)	Not specified (G)
Major Group:							
34, Fabricated Metal Products.....	13,353	99	521	1,278	3,795	7,418	243
35, Industrial Machinery and Equipment ..	14,037	126	464	1,402	3,795	7,911	338
36, Electronic and Other Electric Equipment	7,004	94	522	1,044	2,235	3,002	107
37, Transportation Equipment	4,003	31	192	445	1,193	2,090	53
38, Instruments and Related Products....	3,854	62	213	549	1,218	1,750	62
Age of plant:							
Less than 5 years.....	6,005	67	331	696	1,897	2,921	93
5 years to 14 years	13,803	142	601	1,516	3,898	7,401	245
15 years to 29 years	12,685	113	594	1,371	3,609	6,706	292
30 years or more	9,424	90	379	1,127	2,811	4,845	173
Not specified	334	-	6	7	21	298	-
Number of employees:							
Less than 20	4,955	30	70	315	995	3,484	62
20 to 99	24,899	191	876	2,088	7,376	13,762	606
100 to 499	10,144	159	667	1,743	3,192	4,267	117
500 to 999	1,252	21	172	305	426	325	4
1,000 or more	801	12	121	263	244	148	12
Not specified	199	-	6	3	3	186	1
Unionized plants:							
Yes	7,842	73	383	917	2,504	3,826	139
Contract in effect:							
Yes	7,587	72	367	890	2,454	3,666	138
No	256	1	17	27	51	160	1
No	34,244	340	1,521	3,793	9,720	18,209	662
Not specified	165	-	7	8	13	137	1
Percentage of products exported:							
None	12,099	62	270	799	2,957	7,738	272
Less than 10 percent	19,125	239	943	2,047	6,069	9,476	351
10 percent to 19 percent	5,653	51	300	998	1,628	2,575	102
20 percent to 49 percent	3,925	39	319	658	1,200	1,649	61
50 percent or more	967	11	67	186	279	423	2
Not specified	481	10	12	31	103	310	14
Value of goods and services:							
Less than \$750,000	2,078	10	82	126	307	1,516	37
\$750,000 to less than \$1 million	1,917	3	40	95	606	1,118	55
\$1 million to less than \$5 million	17,806	141	514	1,423	4,926	10,434	367
\$5 million to less than \$10 million	7,853	103	354	814	2,356	4,030	196
\$10 million to less than \$25 million	6,464	67	371	948	2,068	2,910	100
\$25 million to less than \$50 million	2,827	31	173	588	1,021	999	14
\$50 million to less than \$100 million	1,467	34	169	311	482	462	10
\$100 million or more	1,283	24	198	381	400	268	11
Not specified	556	-	8	31	71	434	12
Products made to military specifications:							
Yes	16,650	155	861	2,031	5,211	8,003	389
No	22,010	201	889	2,376	5,987	12,227	329
Don't know	3,350	56	151	304	1,017	1,738	84
Not specified	241	-	10	6	21	203	-

See footnotes at end of table.

Table 4-10. Plans to Acquire Technologically Advanced Materials Handling Equipment and Software over the Next 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Total replacement (75 percent or more) (B)	Major upgrade (25 percent to less than 75 percent) (C)	Minor upgrade (less than 25 percent) (D)	Under consideration, but no firm plans (E)	Not applicable (F)	Not specified (G)
Prime contractor to defense agencies:							
Yes: Percent of products shipped.....	11,107	102	652	1,444	3,565	5,145	199
1 percent to 24 percent	8,950	80	556	1,114	2,880	4,188	132
25 percent to 74 percent	1,285	12	60	199	424	566	23
75 percent or more	578	3	26	96	191	245	16
Don't know.....	294	7	10	34	70	146	27
No	29,173	271	1,139	3,074	8,104	16,041	544
Don't know.....	1,801	40	109	197	563	838	54
Not specified.....	170	-	10	3	4	147	6
Subcontractor to defense agencies:							
Yes: Percent of products shipped.....	16,971	153	909	2,119	4,918	8,564	307
1 percent to 24 percent	11,232	105	569	1,496	3,183	5,709	170
25 percent to 74 percent	3,220	32	204	450	904	1,597	33
75 percent or more	1,295	9	88	99	518	522	59
Don't know.....	1,223	8	47	74	313	736	45
No	14,929	129	613	1,608	4,088	8,261	230
Don't know.....	10,057	130	367	988	3,190	5,123	260
Not specified.....	294	-	22	3	41	223	6
Foreign owned ¹ :							
Yes	3,349	44	256	592	1,012	1,391	55
No	37,340	358	1,540	3,914	10,779	20,012	736
Don't know.....	1,142	11	86	178	393	471	3
Not specified.....	420	-	28	34	51	298	8

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 4-11. Anticipated Cost to Acquire Technologically Advanced Materials Handling Equipment and Software over the Next 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	4,491	734	54	2	3	7,819	249
35, Industrial Machinery and Equipment	14,037	4,672	672	67	7	3	8,244	371
36, Electronic and Other Electric Equipment	7,004	2,929	623	113	24	23	3,156	136
37, Transportation Equipment	4,003	1,319	406	70	8	7	2,120	74
38, Instruments and Related Products	3,854	1,470	365	56	5	4	1,868	85
Age of plant:								
Less than 5 years	6,005	2,330	442	62	4	2	3,035	129
5 years to 14 years	13,803	4,777	767	66	7	14	7,851	321
15 years to 29 years	12,685	4,424	859	101	23	12	6,996	270
30 years or more	9,424	3,321	723	131	12	11	5,031	195
Not specified	334	29	9	-	-	1	295	-
Number of employees:								
Less than 20	4,955	1,283	44	-	-	-	3,514	115
20 to 99	24,899	8,554	849	35	-	6	14,824	630
100 to 499	10,144	4,346	1,260	126	15	5	4,244	148
500 to 999	1,252	485	362	69	9	8	313	7
1,000 or more	801	205	280	129	22	22	131	12
Not specified	199	8	6	1	1	-	182	2
Unionized plants:								
Yes	7,842	2,695	689	141	21	12	4,132	153
Contract in effect:								
Yes	7,587	2,624	669	138	20	12	3,971	153
No	256	70	20	3	1	-	162	-
No	34,244	12,166	2,106	218	26	28	18,938	762
Not specified	165	21	6	1	-	-	136	1
Percentage of products exported:								
None	12,099	3,236	434	61	1	11	8,052	304
Less than 10 percent	19,125	7,195	1,299	121	25	9	10,047	429
10 percent to 19 percent	5,653	2,338	502	61	9	14	2,641	89
20 percent to 49 percent	3,925	1,585	441	100	11	2	1,723	64
50 percent or more	967	407	91	18	1	4	444	2
Not specified	481	119	33	-	-	1	301	27
Value of goods and services:								
Less than \$750,000	2,078	539	15	7	-	-	1,463	53
\$750,000 to less than \$1 million	1,917	671	46	-	-	-	1,112	87
\$1 million to less than \$5 million	17,806	5,675	468	22	-	6	11,146	489
\$5 million to less than \$10 million	7,853	2,937	416	11	-	-	4,370	119
\$10 million to less than \$25 million	6,464	2,806	583	29	-	-	2,938	108
\$25 million to less than \$50 million	2,827	1,238	477	46	9	-	1,027	30
\$50 million to less than \$100 million	1,467	540	357	69	6	5	483	7
\$100 million or more	1,283	369	424	177	29	29	245	9
Not specified	556	106	15	-	2	-	421	12
Products made to military specifications:								
Yes	16,650	6,293	1,191	174	21	16	8,536	419
No	22,010	7,491	1,365	157	24	20	12,523	430
Don't know	3,350	1,063	228	29	2	5	1,957	66
Not specified	241	35	15	-	-	-	191	-

See footnotes at end of table.

Table 4-11. Anticipated Cost to Acquire Technologically Advanced Materials Handling Equipment and Software over the Next 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped . . .	11,107	4,426	927	132	16	12	5,399	195
1 percent to 24 percent	8,950	3,607	689	94	8	8	4,405	139
25 percent to 74 percent	1,285	536	116	14	3	1	578	37
75 percent or more	578	201	96	19	4	2	237	19
Don't know	294	81	27	4	1	1	180	-
No	29,173	9,860	1,653	202	31	27	16,748	653
Don't know	1,801	579	208	27	-	2	924	62
Not specified	170	17	12	-	-	-	136	6
Subcontractor to defense agencies:								
Yes: Percent of products shipped . . .	16,971	6,330	1,209	166	27	17	8,896	324
1 percent to 24 percent	11,232	4,206	790	115	8	10	5,877	225
25 percent to 74 percent	3,220	1,237	247	18	11	8	1,638	61
75 percent or more	1,295	488	124	13	-	-	654	17
Don't know	1,223	399	49	20	8	-	727	21
No	14,929	5,103	877	91	13	18	8,565	262
Don't know	10,057	3,379	706	104	7	5	5,534	324
Not specified	294	70	8	-	-	-	211	6
Foreign owned ¹ :								
Yes	3,349	1,370	479	70	6	11	1,352	61
No	37,340	12,995	2,150	240	30	24	21,077	823
Don't know	1,142	409	155	46	9	4	515	5
Not specified	420	107	15	5	1	2	263	26

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Chapter 5. Inspection and Quality Control

Inspection and Quality Control includes the following technologies:

- Automated sensor-based inspection and/or testing equipment used on incoming or in-process materials or used on final product
- Local area network (LAN) for technical data
- LAN for factory use
- Intercompany computer network linking subcontractors, suppliers, and/or customers
- Programmable controller(s)
- Computer(s) used for control on the factory floor

An average of 57 percent of plants classified in each of the five industries indicated that inspection and quality control equipment was not applicable to operations or was used in less than 10 percent of operations. Plants with 500 or more employees, or having shipments of \$100 million or more, were more likely to use this type of equipment in 10 to 24 percent of operations, compared with plants having fewer than 500 employees or shipments of less than \$100 million, who indicated usage of inspection and quality control equipment in less than 10 percent of their operations. Dependency on inspection and quality control equipment is anticipated to increase slightly over the next 3 years. The percentage of plants using this equipment in less than 10 percent of operations is expected to decrease by as much as 8 percent, while the percentage of plants using this equipment in each of the remaining four categories (10 to 24 percent, 25 to 49 percent, 50 to 74 percent, and 75 percent or more) is expected to increase 1 or 2 percent. The percentage of plants reporting that operations are not dependent on inspection or quality control equipment is expected to remain unchanged.

Total investments (excluding education and training) generally remained under \$100,000 for plants surveyed.

This number tended to increase slightly (\$100,000 to \$1 million) for plants with employment size of 500 or more or having \$100 million or more in shipments.

The average length of time to install the inspection and quality control equipment and have it fully operational was less than 3 months for the majority of plants surveyed.

An average of 41 percent of plants in each of the five SIC major groups indicated that training and education costs related to inspection and quality control equipment were not applicable to their operations. Total investment for education and training, when applicable, was generally less than \$10,000. Plants with over 500 employees or having \$100 million or more in shipments had a tendency to spend \$10,000 to \$50,000.

Seventy-six percent (32,115) of plants indicated no problems in the acquisition or use of inspection and quality control equipment over the last 3 years. For those plants reporting problems, overall cost was cited most often, as reported by 66 percent (5,994) of the plants.

Approximately 33 percent of plants reporting in each of the five industries indicated no firm plans to acquire inspection or quality control equipment over the next 3 years. An average of 21 percent anticipate minor upgrades. Anticipated costs to acquire this equipment is expected to be under \$100,000 for plants reporting in each of the industries. Plants with 500 or more employees or having value of shipments of \$100 million or more, expect to pay between \$100,000 and \$1 million. Barriers to future acquisitions include cost of equipment, software, and education.

Benefits attributed to use of inspection and quality control equipment include improved quality and reduced labor costs. The third most reported benefit for plants classified in SIC major groups 34 (Fabricated Metal Products) and 35 (Industrial Machinery and Equipment) was a marketing advantage. For plants classified in SIC major groups 36 (Electronic and Other Electric Equipment), 37 (Transportation Equipment), and 38 (Instruments and Related Products), the third most significant benefit was increased flexibility.

Table 5-1. Percentage of Operations Dependent on Technologically Advanced Inspection and Quality Control Equipment and Software by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	4,372	1,671	875	862	1,073	4,381	119
35, Industrial Machinery and Equipment	14,037	4,645	2,109	1,217	1,151	1,340	3,466	110
36, Electronic and Other Electric Equipment	7,004	1,991	1,191	845	749	777	1,408	43
37, Transportation Equipment	4,003	1,147	519	380	294	341	1,285	37
38, Instruments and Related Products	3,854	1,261	741	412	277	299	849	15
Age of plant:								
Less than 5 years	6,005	1,868	848	595	521	596	1,547	30
5 years to 14 years	13,803	4,609	1,952	1,220	1,129	1,239	3,579	75
15 years to 29 years	12,685	3,708	2,059	1,104	1,094	1,100	3,502	120
30 years or more	9,424	3,204	1,370	790	586	883	2,492	99
Not specified	334	26	2	20	4	12	268	-
Number of employees:								
Less than 20	4,955	1,472	450	188	114	211	2,468	52
20 to 99	24,899	8,428	3,154	1,811	1,788	2,139	7,366	213
100 to 499	10,144	3,119	2,101	1,351	1,022	1,126	1,381	44
500 to 999	1,252	250	317	235	223	177	46	4
1,000 or more	801	95	199	142	180	167	14	3
Not specified	199	50	10	2	7	10	113	7
Unionized plants:								
Yes	7,842	2,610	1,097	764	666	724	1,919	62
Contract in effect:								
Yes	7,587	2,501	1,081	755	650	708	1,829	62
No	256	109	16	10	16	16	89	-
No	34,244	10,748	5,118	2,964	2,665	3,100	9,389	260
Not specified	165	56	16	1	3	7	81	1
Percentage of products exported:								
None	12,099	3,442	1,197	694	870	940	4,809	147
Less than 10 percent	19,125	6,367	2,944	1,715	1,502	1,783	4,707	105
10 percent to 19 percent	5,653	1,908	1,041	706	444	566	950	39
20 percent to 49 percent	3,925	1,211	812	466	376	428	614	19
50 percent or more	967	359	167	113	116	91	119	1
Not specified	481	128	71	35	25	21	189	12
Value of goods and services:								
Less than \$750,000	2,078	481	191	77	25	157	1,130	17
\$750,000 to less than \$1 million	1,917	546	196	79	138	93	845	20
\$1 million to less than \$5 million	17,806	6,096	2,029	1,233	1,157	1,318	5,823	150
\$5 million to less than \$10 million	7,853	2,887	1,118	635	568	826	1,751	67
\$10 million to less than \$25 million	6,464	1,913	1,382	752	636	673	1,051	56
\$25 million to less than \$50 million	2,827	826	678	436	287	289	304	7
\$50 million to less than \$100 million	1,467	372	299	248	222	201	119	6
\$100 million or more	1,283	171	313	246	266	253	33	1
Not specified	556	122	25	23	34	19	333	-
Products made to military specifications:								
Yes	16,650	4,915	2,888	1,903	1,671	1,887	3,314	72
No	22,010	7,411	2,944	1,499	1,455	1,633	6,880	188
Don't know	3,350	1,048	391	323	197	306	1,032	53
Not specified	241	40	8	4	10	4	163	10

See footnotes at end of table.

Table 5-1. **Percentage of Operations Dependent on Technologically Advanced Inspection and Quality Control Equipment and Software by Plant Characteristic—Continued**

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped	11,107	3,463	2,033	1,324	962	950	2,306	69
1 percent to 24 percent.....	8,950	2,914	1,600	969	771	773	1,880	43
25 percent to 74 percent.....	1,285	357	305	196	99	108	206	16
75 percent or more.....	578	125	97	121	75	60	101	-
Don't know.....	294	67	31	39	18	10	119	10
No	29,173	9,487	3,955	2,262	2,231	2,674	8,312	251
Don't know.....	1,801	454	239	142	132	202	628	3
Not specified	170	10	4	-	9	4	142	-
Subcontractor to defense agencies:								
Yes: Percent of products shipped	16,971	4,941	3,031	1,891	1,847	2,009	3,172	81
1 percent to 24 percent.....	11,232	3,509	1,984	1,146	1,111	1,277	2,159	47
25 percent to 74 percent.....	3,220	808	665	445	426	401	444	31
75 percent or more.....	1,295	311	226	234	181	169	173	1
Don't know.....	1,223	312	155	67	129	162	396	2
No	14,929	5,054	1,805	1,022	874	1,052	4,996	126
Don't know.....	10,057	3,373	1,391	790	581	762	3,043	117
Not specified	294	47	4	26	32	8	178	-
Foreign owned¹:								
Yes.....	3,349	961	647	428	454	305	538	17
No	37,340	12,054	5,274	3,146	2,702	3,344	10,518	301
Don't know.....	1,142	285	263	107	136	174	171	6
Not specified	420	114	47	48	42	7	162	-

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 5-2. Total Investment in Technologically Advanced Inspection and Quality Control Equipment and Software over the Last 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	7,286	930	54	12	5	4,900	167
35, Industrial Machinery and Equipment	14,037	8,086	1,453	158	20	14	4,200	107
36, Electronic and Other Electric Equipment	7,004	4,036	1,027	239	30	20	1,562	90
37, Transportation Equipment	4,003	1,769	576	104	39	28	1,453	34
38, Instruments and Related Products	3,854	2,223	482	94	13	14	985	43
Age of plant:								
Less than 5 years	6,005	3,497	628	82	18	6	1,724	50
5 years to 14 years	13,803	7,886	1,248	147	25	13	4,379	106
15 years to 29 years	12,685	6,885	1,500	213	32	20	3,917	118
30 years or more	9,424	5,047	1,080	206	38	42	2,853	159
Not specified	334	85	12	1	-	1	227	7
Number of employees:								
Less than 20	4,955	2,158	22	-	-	-	2,705	70
20 to 99	24,899	14,248	1,648	91	4	3	8,622	284
100 to 499	10,144	6,263	1,968	223	20	3	1,602	65
500 to 999	1,252	520	498	124	29	15	55	12
1,000 or more	801	148	300	207	61	61	16	7
Not specified	199	63	31	3	-	-	100	2
Unionized plants:								
Yes	7,842	4,275	1,009	211	54	37	2,181	75
Contract in effect:								
Yes	7,587	4,163	992	207	54	37	2,059	75
No	256	112	17	4	-	-	122	-
No	34,244	19,074	3,446	435	60	45	10,822	362
Not specified	165	50	12	2	-	-	97	3
Percentage of products exported:								
None	12,099	5,682	767	81	5	4	5,348	212
Less than 10 percent	19,125	11,092	2,100	275	47	32	5,477	101
10 percent to 19 percent	5,653	3,514	761	151	19	14	1,138	57
20 percent to 49 percent	3,925	2,302	621	114	35	22	786	46
50 percent or more	967	569	169	26	3	8	185	6
Not specified	481	240	49	1	4	1	166	19
Value of goods and services:								
Less than \$750,000	2,078	730	78	-	-	-	1,246	23
\$750,000 to less than \$1 million	1,917	974	7	5	-	-	848	84
\$1 million to less than \$5 million	17,806	9,816	937	38	-	-	6,846	170
\$5 million to less than \$10 million	7,853	4,917	752	36	1	1	2,070	75
\$10 million to less than \$25 million	6,464	4,023	1,029	99	12	3	1,249	50
\$25 million to less than \$50 million	2,827	1,779	586	105	16	3	323	15
\$50 million to less than \$100 million	1,467	659	551	92	11	4	138	12
\$100 million or more	1,283	328	504	268	72	69	36	6
Not specified	556	174	24	5	1	2	343	7
Products made to military specifications:								
Yes	16,650	9,866	2,283	331	55	36	3,961	118
No	22,010	11,689	1,901	271	51	43	7,790	265
Don't know	3,350	1,777	270	45	8	2	1,192	55
Not specified	241	68	13	1	-	-	156	2

See footnotes at end of table.

Table 5-2. Total Investment in Technologically Advanced Inspection and Quality Control Equipment and Software over the Last 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped	11,107	6,473	1,482	248	43	33	2,741	87
1 percent to 24 percent	8,950	5,337	1,120	161	28	21	2,235	49
25 percent to 74 percent	1,285	716	218	37	6	4	283	22
75 percent or more	578	293	107	46	8	8	101	17
Don't know	294	128	37	5	1	-	122	-
No	29,173	16,051	2,774	370	65	44	9,547	322
Don't know	1,801	840	204	28	6	4	689	30
Not specified	170	35	8	1	-	-	124	2
Subcontractor to defense agencies:								
Yes: Percent of products shipped	16,971	10,132	2,418	340	57	42	3,883	98
1 percent to 24 percent	11,232	6,833	1,390	225	40	27	2,678	40
25 percent to 74 percent	3,220	1,861	625	63	6	6	627	33
75 percent or more	1,295	843	227	29	6	4	184	2
Don't know	1,223	595	177	24	5	5	395	23
No	14,929	7,687	1,186	197	27	24	5,618	189
Don't know	10,057	5,471	842	108	30	16	3,439	151
Not specified	294	110	21	2	-	-	159	2
Foreign owned ¹ :								
Yes	3,349	1,869	549	167	24	14	706	20
No	37,340	20,745	3,585	433	82	57	12,027	409
Don't know	1,142	571	291	43	7	9	211	9
Not specified	420	213	42	5	-	1	155	2

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 5-3. Average Length of Time from Placement of Order to Full Operation of Technologically Advanced Inspection and Quality Control Equipment and Software by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than 3 months (B)	3 months to less than 6 months (C)	6 months to less than 1 year (D)	1 year to less than 2 years (E)	2 years to less than 3 years (F)	3 years or more (G)	Not applicable (H)	Not specified (I)
Major Group:									
34, Fabricated Metal Products	13,353	5,374	1,187	380	46	6	20	6,143	195
35, Industrial Machinery and Equipment	14,037	5,860	1,475	489	81	72	-	5,752	307
36, Electronic and Other Electric Equipment	7,004	2,975	1,134	368	57	8	15	2,314	133
37, Transportation Equipment	4,003	1,344	497	289	62	9	4	1,742	55
38, Instruments and Related Products	3,854	1,538	510	189	35	12	7	1,477	87
Age of plant:									
Less than 5 years	6,005	2,738	599	169	14	3	1	2,375	106
5 years to 14 years	13,803	5,754	1,487	471	66	79	2	5,705	239
15 years to 29 years	12,685	5,025	1,596	492	95	11	-	5,228	237
30 years or more	9,424	3,521	1,116	575	107	13	42	3,861	190
Not specified	334	53	5	10	-	-	-	261	5
Number of employees:									
Less than 20	4,955	1,482	134	40	-	23	-	3,169	107
20 to 99	24,899	10,575	1,938	527	76	59	31	11,202	491
100 to 499	10,144	4,461	1,990	678	84	18	10	2,746	156
500 to 999	1,252	382	445	211	43	3	1	151	16
1,000 or more	801	136	279	246	78	2	3	49	7
Not specified	199	56	17	13	-	1	-	113	-
Unionized plants:									
Yes	7,842	2,683	1,276	565	109	11	23	3,081	94
Contract in effect:									
Yes	7,587	2,605	1,251	561	107	11	23	2,933	94
No	256	77	25	4	2	-	-	148	-
No	34,244	14,355	3,522	1,150	173	96	22	14,245	682
Not specified	165	53	5	1	-	-	-	104	1
Percentage of products exported:									
None	12,099	4,378	850	262	17	23	6	6,230	333
Less than 10 percent	19,125	7,933	2,231	803	181	67	34	7,603	273
10 percent to 19 percent	5,653	2,545	902	285	33	16	6	1,813	53
20 percent to 49 percent	3,925	1,633	622	280	36	1	-	1,273	80
50 percent or more	967	460	134	78	16	-	-	261	19
Not specified	481	142	64	6	-	-	-	250	19
Value of goods and services:									
Less than \$750,000	2,078	582	81	4	-	-	-	1,327	83
\$750,000 to less than \$1 million	1,917	785	70	11	1	-	14	942	93
\$1 million to less than \$5 million	17,806	7,499	945	303	48	63	17	8,640	291
\$5 million to less than \$10 million	7,853	3,381	859	265	32	22	4	3,146	144
\$10 million to less than \$25 million	6,464	2,844	1,155	326	45	7	1	1,983	104
\$25 million to less than \$50 million	2,827	1,143	744	226	39	8	1	641	25
\$50 million to less than \$100 million	1,467	457	459	219	29	4	4	288	6
\$100 million or more	1,283	286	452	352	84	3	3	90	12
Not specified	556	113	37	10	5	-	1	373	17
Products made to military specifications:									
Yes	16,650	7,399	2,334	743	148	40	38	5,745	202
No	22,010	8,336	2,186	871	124	65	7	9,899	520
Don't know	3,350	1,296	278	99	10	1	-	1,612	54
Not specified	241	60	5	2	-	-	-	174	-

See footnotes at end of table.

Table 5-3. Average Length of Time from Placement of Order to Full Operation of Technologically Advanced Inspection and Quality Control Equipment and Software by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than 3 months (B)	3 months to less than 6 months (C)	6 months to less than 1 year (D)	1 year to less than 2 years (E)	2 years to less than 3 years (F)	3 years or more (G)	Not applicable (H)	Not specified (I)
Prime contractor to defense agencies:									
Yes: Percent of products shipped	11,107	4,741	1,596	528	123	39	10	3,913	156
1 percent to 24 percent	8,950	3,961	1,192	398	69	39	5	3,195	89
25 percent to 74 percent	1,285	525	243	69	23	-	2	370	52
75 percent or more	578	166	140	51	28	-	2	177	15
Don't know	294	89	21	10	2	-	-	172	-
No	29,173	11,736	2,968	1,137	147	67	35	12,527	556
Don't know	1,801	579	234	50	13	-	1	860	64
Not specified	170	36	5	-	-	-	-	129	-
Subcontractor to defense agencies:									
Yes: Percent of products shipped	16,971	7,754	2,334	775	125	48	37	5,672	224
1 percent to 24 percent	11,232	5,151	1,496	451	74	18	32	3,917	92
25 percent to 74 percent	3,220	1,530	536	155	35	27	4	845	88
75 percent or more	1,295	620	203	115	11	3	1	322	19
Don't know	1,223	453	99	53	5	-	-	588	25
No	14,929	5,530	1,506	554	92	54	3	6,852	336
Don't know	10,057	3,767	930	381	65	5	5	4,689	216
Not specified	294	40	33	5	-	-	-	216	-
Foreign owned ¹ :									
Yes	3,349	1,199	697	255	41	4	1	1,084	68
No	37,340	15,287	3,839	1,306	218	102	44	15,847	699
Don't know	1,142	481	199	148	22	1	1	281	9
Not specified	420	125	68	7	1	-	-	219	-

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 5-4. Impact of Technologically Advanced Inspection and Quality Control Equipment and Software on Education and Training Costs by Plant Characteristic

Plant characteristic	Number of plants (A)	Increased significantly (B)	Increased moderately (C)	Increased marginally (D)	No change (E)	Decreased (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	817	1,592	2,508	1,914	111	6,300	112
35, Industrial Machinery and Equipment	14,037	1,295	1,789	2,274	2,734	89	5,760	95
36, Electronic and Other Electric Equipment ..	7,004	485	1,263	1,499	1,191	140	2,357	69
37, Transportation Equipment	4,003	338	578	698	511	20	1,804	54
38, Instruments and Related Products	3,854	171	533	857	793	44	1,408	47
Age of plant:								
Less than 5 years	6,005	410	787	1,173	1,065	36	2,500	33
5 years to 14 years	13,803	994	1,820	2,499	2,467	237	5,712	75
15 years to 29 years	12,685	929	1,748	2,441	2,107	83	5,225	151
30 years or more	9,424	770	1,386	1,693	1,463	49	3,957	106
Not specified	334	1	14	30	42	-	236	12
Number of employees:								
Less than 20	4,955	223	285	307	753	20	3,309	57
20 to 99	24,899	1,629	2,706	4,185	4,428	262	11,445	245
100 to 499	10,144	896	2,064	2,660	1,741	106	2,619	57
500 to 999	1,252	189	375	416	140	10	112	11
1,000 or more	801	168	297	235	60	6	29	6
Not specified	199	-	29	33	22	-	116	-
Unionized plants:								
Yes	7,842	624	1,213	1,532	1,134	49	3,253	38
Contract in effect:								
Yes	7,587	600	1,188	1,496	1,127	49	3,089	38
No	256	24	25	35	7	-	164	-
No	34,244	2,481	4,538	6,272	5,978	349	14,288	337
Not specified	165	1	4	32	32	6	88	1
Percentage of products exported:								
None	12,099	793	1,226	1,608	1,654	66	6,579	172
Less than 10 percent	19,125	1,423	2,693	3,809	3,307	184	7,541	168
10 percent to 19 percent	5,653	464	1,008	1,236	1,018	109	1,794	24
20 percent to 49 percent	3,925	328	626	879	895	45	1,140	12
50 percent or more	967	59	170	217	205	1	314	-
Not specified	481	38	32	86	64	-	261	-
Value of goods and services:								
Less than \$750,000	2,078	129	124	132	160	3	1,493	38
\$750,000 to less than \$1 million	1,917	117	149	128	322	28	1,132	41
\$1 million to less than \$5 million	17,806	1,091	1,829	2,586	3,194	169	8,784	154
\$5 million to less than \$10 million	7,853	506	1,062	1,600	1,515	70	3,039	61
\$10 million to less than \$25 million	6,464	603	1,101	1,634	1,115	75	1,896	40
\$25 million to less than \$50 million	2,827	266	606	832	488	33	579	23
\$50 million to less than \$100 million	1,467	148	402	451	210	16	231	8
\$100 million or more	1,283	229	449	393	110	12	83	8
Not specified	556	18	33	80	30	-	392	4
Products made to military specifications:								
Yes	16,650	1,524	2,753	3,713	2,743	187	5,600	130
No	22,010	1,397	2,578	3,449	3,813	205	10,367	201
Don't know	3,350	178	420	647	579	12	1,469	45
Not specified	241	6	5	27	9	-	193	-

See footnotes at end of table.

Table 5-4. Impact of Technologically Advanced Inspection and Quality Control Equipment and Software on Education and Training Costs by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Increased significantly (B)	Increased moderately (C)	Increased marginally (D)	No change (E)	Decreased (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped	11,107	730	1,857	2,449	1,977	143	3,879	71
1 percent to 24 percent	8,950	594	1,490	1,953	1,582	123	3,162	45
25 percent to 74 percent	1,285	79	206	321	282	11	374	12
75 percent or more	578	47	131	117	80	7	183	15
Don't know	294	9	30	58	33	3	160	-
No	29,173	2,274	3,694	5,054	4,829	239	12,824	259
Don't know	1,801	96	201	310	329	22	796	46
Not specified	170	6	3	22	8	-	130	-
Subcontractor to defense agencies:								
Yes: Percent of products shipped	16,971	1,577	2,884	3,855	2,865	223	5,496	71
1 percent to 24 percent	11,232	944	1,873	2,481	1,911	111	3,883	30
25 percent to 74 percent	3,220	338	560	930	533	29	804	26
75 percent or more	1,295	166	287	242	256	61	278	5
Don't know	1,223	129	164	202	165	22	531	10
No	14,929	888	1,737	2,275	2,512	101	7,288	129
Don't know	10,057	640	1,121	1,666	1,724	81	4,672	154
Not specified	294	1	14	40	42	-	174	23
Foreign owned¹:								
Yes	3,349	283	597	815	525	42	1,072	15
No	37,340	2,646	4,925	6,651	6,345	351	16,090	333
Don't know	1,142	145	205	286	205	12	285	4
Not specified	420	31	28	84	69	-	183	24

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 5-5. Cost of Education and Training Related to the Use of Technologically Advanced Inspection and Quality Control Equipment and Software over the Last 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than \$10,000 (B)	\$10,000 to less than \$50,000 (C)	\$50,000 to less than \$100,000 (D)	\$100,000 to less than \$250,000 (E)	\$250,000 to less than \$500,000 (F)	\$500,000 to less than \$1 million (G)	\$1 million to less than \$5 million (H)	\$5 million and over (I)	Not applicable (J)	Not specified (K)
Major Group:											
34, Fabricated Metal Products	13,353	5,530	1,177	361	101	31	6	2	7	5,893	245
35, Industrial Machinery and Equipment	14,037	6,024	1,548	419	116	29	9	11	2	5,567	312
36, Electronic and Other Electric Equipment	7,004	3,011	1,134	293	151	69	15	10	5	2,233	83
37, Transportation Equipment	4,003	1,440	495	145	107	25	18	13	3	1,704	53
38, Instruments and Related Products	3,854	1,649	455	173	51	17	12	7	2	1,403	85
Age of plant:											
Less than 5 years	6,005	2,587	767	131	37	29	1	8	7	2,348	89
5 years to 14 years	13,803	6,233	1,405	362	165	38	8	5	2	5,455	132
15 years to 29 years	12,685	5,069	1,409	558	159	34	26	7	4	5,079	340
30 years or more	9,424	3,682	1,218	341	164	70	26	22	5	3,691	205
Not specified	334	82	11	-	1	-	-	-	1	226	12
Number of employees:											
Less than 20	4,955	1,458	140	31	-	-	-	-	7	3,149	171
20 to 99	24,899	10,841	2,005	514	116	50	-	-	-	10,924	450
100 to 499	10,144	4,769	2,054	471	199	45	5	4	-	2,476	123
500 to 999	1,252	392	414	177	96	26	12	9	-	111	15
1,000 or more	801	135	186	188	111	51	43	30	12	31	12
Not specified	199	59	9	12	4	-	-	-	-	109	7
Unionized plants:											
Yes	7,842	3,019	1,068	385	191	46	35	23	5	2,959	111
Contract in effect:											
Yes	7,587	2,969	1,046	381	184	44	35	23	5	2,789	111
No	256	50	22	4	8	2	-	-	-	169	-
No	34,244	14,584	3,731	1,005	334	125	25	20	15	13,739	666
Not specified	165	50	9	1	1	-	-	-	-	103	1
Percentage of products exported:											
None	12,099	4,533	795	187	107	9	6	4	2	6,165	290
Less than 10 percent	19,125	8,231	2,392	619	218	79	21	11	9	7,196	350
10 percent to 19 percent	5,653	2,566	891	275	70	43	5	10	4	1,709	80
20 percent to 49 percent	3,925	1,763	524	221	113	37	22	14	3	1,200	29
50 percent or more	967	388	166	79	17	3	6	3	1	301	3
Not specified	481	173	40	10	2	1	-	1	-	228	26
Value of goods and services:											
Less than \$750,000	2,078	619	35	12	-	-	-	-	-	1,361	51
\$750,000 to less than \$1 million	1,917	671	89	8	5	-	-	-	-	1,050	95
\$1 million to less than \$5 million	17,806	7,389	1,282	340	57	29	-	-	7	8,396	306
\$5 million to less than \$10 million	7,853	3,663	737	189	47	28	1	-	-	3,026	161
\$10 million to less than \$25 million	6,464	3,075	1,173	231	105	19	-	4	-	1,774	84
\$25 million to less than \$50 million	2,827	1,316	656	188	82	8	-	6	-	532	38
\$50 million to less than \$100 million	1,467	519	456	143	82	26	10	1	-	213	18
\$100 million or more	1,283	272	361	271	146	58	49	31	12	71	12
Not specified	556	129	20	10	2	3	1	1	-	376	13

See footnotes at end of table.

Table 5-5. **Cost of Education and Training Related to the Use of Technologically Advanced Inspection and Quality Control Equipment and Software over the Last 3 Years by Plant Characteristic—Continued**

Plant characteristic	Number of plants (A)	Less than \$10,000 (B)	\$10,000 to less than \$50,000 (C)	\$50,000 to less than \$100,000 (D)	\$100,000 to less than \$250,000 (E)	\$250,000 to less than \$500,000 (F)	\$500,000 to less than \$1 million (G)	\$1 million to less than \$5 million (H)	\$5 million and over (I)	Not applicable (J)	Not specified (K)
Products made to military specifications:											
Yes	16,650	7,446	2,431	707	249	115	36	19	5	5,411	231
No	22,010	8,791	2,084	603	234	47	23	20	15	9,742	451
Don't know	3,350	1,366	283	80	42	9	1	4	-	1,468	97
Not specified	241	50	10	1	1	-	-	-	-	179	-
Prime contractor to defense agencies:											
Yes: Percent of products shipped	11,107	4,935	1,549	469	171	64	31	18	5	3,680	185
1 percent to 24 percent	8,950	4,042	1,232	342	110	45	14	13	4	3,012	135
25 percent to 74 percent	1,285	628	155	61	36	7	8	1	-	345	43
75 percent or more ...	578	200	127	47	19	10	7	2	1	158	6
Don't know	294	65	35	19	6	1	1	2	-	166	-
No	29,173	12,048	3,049	828	336	94	23	25	6	12,210	555
Don't know	1,801	638	204	93	20	13	6	-	8	780	39
Not specified	170	32	6	1	-	-	-	-	-	130	-
Subcontractor to defense agencies:											
Yes: Percent of products shipped	16,971	7,746	2,480	728	279	124	34	20	6	5,344	210
1 percent to 24 percent	11,232	4,936	1,634	483	184	90	24	16	4	3,779	82
25 percent to 74 percent	3,220	1,694	464	142	61	21	3	1	2	764	70
75 percent or more ...	1,295	708	211	60	20	6	3	3	-	281	3
Don't know	1,223	408	170	43	15	7	4	-	-	520	55
No	14,929	5,770	1,215	442	153	27	17	14	3	6,979	309
Don't know	10,057	4,047	1,112	213	91	20	9	9	10	4,312	235
Not specified	294	92	1	9	3	-	-	-	-	166	23
Foreign owned¹:											
Yes	3,349	1,461	570	177	69	34	3	2	1	1,017	14
No	37,340	15,516	4,001	1,103	425	123	52	37	16	15,346	721
Don't know	1,142	487	227	94	30	14	4	4	2	264	18
Not specified	420	190	12	17	2	-	1	-	173	-	25

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 5-6. Most Significant Problems Encountered over the Last 3 Years in the Acquisition or Use of Technologically Advanced Inspection and Quality Control Equipment and Software by Plant Characteristic

Plant characteristic	Overall cost (A)	Cost of education and training (B)	Worker resistance (C)	Time to develop software (D)	Cost to develop software (E)	Increased maintenance expenses (F)	Need for market expansion (G)	Lack of financial justification (H)	Lack of technical support from vendors (I)	Other (J)
Major Group:										
34, Fabricated Metal Products .	1,634	825	584	607	384	166	243	952	372	269
35, Industrial Machinery and Equipment	1,987	1,189	508	521	413	312	291	1,070	478	285
36, Electronic and Other Electric Equipment	1,255	565	266	501	360	262	143	666	271	165
37, Transportation Equipment . .	569	328	175	203	143	102	55	331	176	83
38, Instruments and Related Products	547	226	108	226	174	108	65	343	125	98
Age of plant:										
Less than 5 years	658	333	123	281	214	133	95	384	233	175
5 years to 14 years	1,796	953	472	637	403	314	193	820	443	206
15 years to 29 years	1,915	982	530	655	427	288	323	1,207	424	270
30 years or more	1,605	845	503	485	430	209	186	945	308	245
Not specified	20	19	12	1	1	5	-	6	14	4
Number of employees:										
Less than 20	447	242	98	65	100	23	62	198	20	46
20 to 99	2,956	1,530	842	883	625	434	438	1,600	726	373
100 to 499	1,953	1,021	504	793	522	300	248	1,153	481	359
500 to 999	300	175	93	136	95	89	28	209	102	71
1,000 or more	288	135	75	170	131	81	21	189	88	50
Not specified	50	29	28	11	1	22	-	12	6	-
Unionized plants:										
Yes	1,239	612	391	523	371	201	159	794	328	257
Contract in effect:										
Yes	1,227	588	388	489	359	200	159	780	322	255
No	12	24	3	33	11	1	-	14	6	2
No	4,737	2,512	1,249	1,527	1,104	748	630	2,560	1,095	642
Not specified	18	9	-	9	-	-	8	8	-	1
Percentage of products exported:										
None	1,291	597	345	311	294	145	172	736	269	201
Less than 10 percent	2,942	1,695	863	968	657	480	378	1,570	682	403
10 percent to 19 percent	884	412	209	338	272	188	170	573	233	146
20 percent to 49 percent	595	282	166	330	178	102	50	337	185	103
50 percent or more	188	102	43	97	65	26	18	108	29	44
Not specified	94	45	12	15	8	8	9	38	25	3
Value of goods and services:										
Less than \$750,000	189	26	19	31	27	18	25	28	50	-
\$750,000 to less than \$1 million	263	154	48	35	30	25	11	139	3	20
\$1 million to less than \$5 million	2,190	1,103	535	618	435	280	350	1,078	436	196
\$5 million to less than \$10 million	889	494	320	350	222	124	115	556	262	157
\$10 million to less than \$25 million	1,207	615	306	388	316	175	174	677	259	296
\$25 million to less than \$50 million	543	334	215	215	161	116	57	389	153	104
\$50 million to less than \$100 million	283	180	84	189	110	67	21	195	99	42
\$100 million or more	402	205	109	225	166	142	43	282	137	84
Not specified	27	22	4	8	7	2	-	19	22	3
Products made to military specifications:										
Yes	3,110	1,534	842	1,081	784	440	406	1,620	637	388
No	2,517	1,317	658	867	616	422	284	1,536	689	478
Don't know	353	271	140	110	74	86	107	194	97	28
Not specified	14	11	-	-	1	-	-	12	-	7

See footnotes at end of table.

Table 5-6. **Most Significant Problems Encountered over the Last 3 Years in the Acquisition or Use of Technologically Advanced Inspection and Quality Control Equipment and Software by Plant Characteristic—Continued**

Plant characteristic	Overall cost (A)	Cost of education and training (B)	Worker resistance (C)	Time to develop software (D)	Cost to develop software (E)	Increased maintenance expenses (F)	Need for market expansion (G)	Lack of financial justification (H)	Lack of technical support from vendors (I)	Other (J)
Prime contractor to defense agencies:										
Yes: Percent of products shipped	1,873	926	482	802	510	324	168	977	339	278
1 percent to 24 percent	1,521	751	401	638	393	249	119	796	267	240
25 percent to 74 percent	179	115	36	77	64	52	27	103	29	22
75 percent or more	128	42	26	69	40	17	14	59	31	13
Don't know	45	18	19	19	13	7	9	19	12	4
No	3,894	2,074	1,093	1,190	921	578	606	2,274	1,015	605
Don't know	218	126	65	67	44	47	22	103	67	17
Not specified	9	7	-	-	-	-	-	8	2	-
Subcontractor to defense agencies:										
Yes: Percent of products shipped	3,096	1,585	805	1,136	824	454	393	1,559	656	371
1 percent to 24 percent	2,021	1,015	507	739	484	280	239	1,047	482	244
25 percent to 74 percent	620	312	172	241	175	130	108	307	104	95
75 percent or more	266	142	65	86	108	34	24	109	42	15
Don't know	189	115	61	71	57	11	22	96	28	17
No	1,632	782	477	502	364	246	197	974	457	309
Don't know	1,235	751	334	377	286	248	206	799	291	219
Not specified	32	15	23	43	1	1	-	30	19	-
Foreign owned ¹ :										
Yes	623	324	102	317	169	143	114	403	162	122
No	5,062	2,631	1,446	1,608	1,225	761	648	2,737	1,156	750
Don't know	242	96	49	89	67	37	34	166	52	27
Not specified	67	82	44	45	13	8	-	56	53	1

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 5-7. Most Significant Anticipated Barriers to Acquisitions of Technologically Advanced Inspection and Quality Control Equipment and Software over the Next 3 Years by Plant Characteristic

Plant characteristic	Cost of equipment (A)	Cost of software (B)	Cost of education and training (C)	Lack of skilled work force (D)	Lack of benefits (E)	Union contract (F)	Lack of technological information (G)	Lack of management support (H)	Incompatibility with other equipment (I)	Lack of product marketability (J)	Lack of technical support from vendors (K)	Other (L)
Major Group:												
34. Fabricated Metal Products	3,757	2,206	1,581	959	1,460	119	363	403	284	330	272	477
35. Industrial Machinery and Equipment	4,074	2,159	1,741	1,139	1,251	76	267	523	275	265	240	681
36. Electronic and Other Electric Equipment	2,291	1,154	907	492	834	50	230	397	162	149	124	298
37. Transportation Equipment	1,288	680	460	321	522	47	117	217	65	116	98	193
38. Instruments and Related Products	1,109	618	431	176	394	12	97	183	83	39	38	132
Age of plant:												
Less than 5 years	1,636	936	587	319	558	26	149	148	129	87	102	196
5 years to 14 years	4,077	2,175	1,661	1,032	1,417	47	368	483	224	306	258	456
15 years to 29 years	3,641	1,988	1,541	965	1,431	73	342	566	233	316	270	561
30 years or more	3,117	1,682	1,305	771	1,042	157	213	514	277	188	133	565
Not specified	48	35	26	-	13	-	1	10	5	-	8	-
Number of employees:												
Less than 20	1,040	549	447	240	352	12	46	96	80	86	28	155
20 to 99	7,250	3,991	3,032	1,670	2,528	111	606	817	466	589	485	1,021
100 to 499	3,379	1,816	1,333	977	1,247	145	345	655	216	176	196	420
500 to 999	462	258	169	108	198	16	45	86	46	22	36	86
1,000 or more	348	185	118	70	133	18	27	54	44	26	15	78
Not specified	40	16	21	22	5	1	4	15	16	-	12	20
Unionized plants:												
Yes	2,644	1,303	1,034	698	1,055	295	262	517	217	230	160	364
Contract in effect:												
Yes	2,593	1,292	971	688	1,043	287	258	502	190	230	160	326
No	51	12	63	10	12	7	3	15	27	-	-	38
No	9,852	5,497	4,083	2,382	3,407	5	812	1,200	651	668	612	1,412
Not specified	23	16	4	6	-	-	-	5	-	-	-	2
Percentage of products exported:												
None	3,160	1,631	1,382	757	1,166	30	205	308	219	291	220	601
Less than 10 percent	6,074	3,351	2,422	1,621	1,968	174	566	846	351	342	350	788
10 percent to 19 percent	1,832	1,005	696	372	697	57	148	285	206	170	142	180
20 percent to 49 percent	1,032	601	439	265	458	28	134	210	67	61	48	131
50 percent or more	318	181	134	39	141	8	19	63	17	22	10	72
Not specified	104	47	48	34	31	6	2	10	8	12	2	9
Value of goods and services:												
Less than \$750,000	386	265	198	86	125	-	8	30	47	34	18	52
\$750,000 to less than \$1 million	522	303	248	177	143	-	8	69	42	20	18	10
\$1 million to less than \$5 million	5,237	2,842	2,226	1,133	1,785	57	431	491	280	459	276	755
\$5 million to less than \$10 million	2,213	1,256	891	616	823	78	186	339	179	136	181	283
\$10 million to less than \$25 million	2,118	1,094	859	618	747	81	229	326	172	132	147	362
\$25 million to less than \$50 million	951	514	331	249	376	45	96	245	44	52	53	103
\$50 million to less than \$100 million	481	257	170	102	201	15	43	124	37	24	46	77
\$100 million or more	537	266	174	101	234	27	49	92	66	41	31	122
Not specified	75	20	23	6	28	-	24	8	3	1	1	15

See footnotes at end of table.

Table 5-7. Most Significant Anticipated Barriers to Acquisitions of Technologically Advanced Inspection and Quality Control Equipment and Software over the Next 3 Years by Plant Characteristic—Continued

Plant characteristic	Cost of equipment (A)	Cost of software (B)	Cost of education and training (C)	Lack of skilled work force (D)	Lack of benefits (E)	Union contract (F)	Lack of technological information (G)	Lack of management support (H)	Incompatibility with other equipment (I)	Lack of product marketability (J)	Lack of technical support from vendors (K)	Other (L)
Products made to military specifications:												
Yes.....	5,583	2,753	2,368	1,447	1,754	163	441	702	453	482	385	921
No.....	5,929	3,392	2,393	1,424	2,277	121	557	895	358	378	361	680
Don't know.....	958	661	349	216	411	19	65	118	53	39	26	166
Not specified.....	22	9	11	-	19	-	12	7	5	-	-	12
Prime contractor to defense agencies:												
Yes: Percent of products shipped.....	3,594	1,896	1,480	834	1,237	110	300	490	220	224	257	597
1 percent to 24 percent.....	2,937	1,519	1,187	715	968	87	256	414	187	184	204	438
25 percent to 74 percent.....	348	212	165	80	192	20	30	30	13	20	28	80
75 percent or more.....	246	133	97	33	54	2	11	25	19	17	25	75
Don't know.....	63	32	30	6	23	-	3	22	1	2	-	5
No.....	8,495	4,595	3,420	2,142	3,080	175	740	1,158	617	654	487	1,121
Don't know.....	417	317	211	111	144	18	33	69	31	20	28	60
Not specified.....	14	8	10	-	-	-	-	5	-	-	-	-
Subcontractor to defense agencies:												
Yes: Percent of products shipped.....	5,845	2,965	2,473	1,390	1,899	139	438	733	371	409	417	975
1 percent to 24 percent.....	3,970	2,016	1,610	940	1,277	76	288	490	245	206	244	649
25 percent to 74 percent.....	1,019	516	407	284	362	50	103	110	74	127	94	239
75 percent or more.....	393	184	237	111	92	2	13	66	18	30	64	68
Don't know.....	463	249	218	55	168	12	35	67	33	46	17	20
No.....	3,857	2,180	1,558	981	1,514	61	412	551	256	357	212	506
Don't know.....	2,756	1,628	1,087	716	1,023	103	222	433	241	132	141	296
Not specified.....	61	43	4	-	25	-	1	5	-	-	1	1
Foreign owned¹:												
Yes.....	1,195	674	435	294	464	36	143	227	89	104	82	194
No.....	10,779	5,845	4,531	2,661	3,789	250	882	1,367	759	784	656	1,535
Don't know.....	447	245	123	99	177	17	43	114	20	11	32	50
Not specified.....	98	53	32	33	31	-	5	14	-	-	1	1

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 5-8. Benefits Derived from the Use of Technologically Advanced Inspection and Quality Control Equipment and Software by Plant Characteristic

Plant characteristic	Labor cost reduction (A)	Quality improvement (B)	Flexibility increase (C)	Setup time reductions (D)	Equipment utilization increase (E)	Inventory reduction (F)	Lead time reduction (G)	Marketing advantage (H)	Other (I)	Not applicable (J)
Major Group:										
34, Fabricated Metal Products .	2,756	4,951	1,408	934	828	442	819	1,715	251	7,207
35, Industrial Machinery and Equipment.....	2,875	6,141	1,839	1,127	794	518	1,088	2,116	224	6,726
36, Electronic and Other Electric Equipment	2,290	3,700	1,121	574	523	508	870	886	151	2,651
37, Transportation Equipment..	909	1,646	672	260	242	183	274	484	111	2,035
38, Instruments and Related Products	1,137	1,724	576	272	241	293	448	352	66	1,682
Age of plant:										
Less than 5 years	1,377	2,678	723	439	353	319	521	715	178	2,753
5 years to 14 years.....	3,392	5,940	1,685	1,033	853	765	1,207	1,703	225	6,648
15 years to 29 years.....	3,036	5,454	1,754	877	818	472	983	1,844	246	6,058
30 years or more.....	2,128	4,027	1,443	797	593	387	771	1,269	147	4,603
Not specified	34	63	11	21	10	1	17	23	9	238
Number of employees:										
Less than 20	668	1,007	154	250	153	116	198	418	75	3,536
20 to 99.....	4,833	9,584	2,695	1,594	1,404	967	1,612	3,110	395	13,191
100 to 499	3,418	5,916	2,112	1,008	816	647	1,278	1,703	248	3,232
500 to 999	589	946	368	183	135	132	235	200	41	163
1,000 or more	439	670	276	130	105	76	166	102	32	63
Not specified	20	40	11	3	15	6	10	21	12	115
Unionized plants:										
Yes.....	2,063	3,596	1,216	668	561	367	724	927	189	3,639
Contract in effect:										
Yes.....	2,024	3,528	1,191	662	548	351	708	894	183	3,466
No.....	39	68	24	6	12	15	15	33	6	173
No.....	7,893	14,541	4,391	2,488	2,064	1,576	2,771	4,604	614	16,546
Not specified	12	25	9	12	4	2	5	23	-	116
Percentage of products exported:										
None	1,985	3,877	1,109	797	635	313	722	1,405	226	7,133
Less than 10 percent.....	4,627	8,562	2,598	1,396	1,200	926	1,511	2,744	324	8,930
10 percent to 19 percent.....	1,769	2,964	957	522	362	342	643	748	111	2,113
20 percent to 49 percent.....	1,226	2,128	785	366	334	279	435	436	99	1,469
50 percent or more.....	294	497	148	72	87	80	153	139	33	373
Not specified	65	135	19	15	10	3	36	82	10	282
Value of goods and services:										
Less than \$750,000	180	439	105	55	42	36	62	146	27	1,511
\$750,000 to less than \$1 million.....	337	496	129	164	119	70	159	108	23	1,180
\$1 million to less than \$5 million.....	3,333	6,272	1,615	1,045	848	638	1,085	2,197	295	9,999
\$5 million to less than \$10 million	1,753	3,371	1,041	534	584	280	536	1,052	114	3,811
\$10 million to less than \$25 million	2,013	3,606	1,164	634	406	421	745	1,145	193	2,230
\$25 million to less than \$50 million	981	1,781	631	293	293	232	406	455	57	767
\$50 million to less than \$100 million	609	1,058	449	208	153	140	210	202	29	283
\$100 million or more.....	688	1,052	428	213	175	111	263	198	62	118
Not specified	74	88	54	22	8	16	35	51	4	400
Products made to military specifications:										
Yes.....	4,712	8,592	2,731	1,648	1,167	677	1,767	2,803	341	6,480
No.....	4,377	8,152	2,406	1,252	1,261	1,093	1,518	2,319	391	12,015
Don't know	859	1,391	471	258	196	175	210	411	71	1,625
Not specified	20	27	7	9	5	-	4	22	1	179

See footnotes at end of table.

Table 5-8. Benefits Derived from the Use of Technologically Advanced Inspection and Quality Control Equipment and Software by Plant Characteristic—Continued

Plant characteristic	Labor cost reduction (A)	Quality improvement (B)	Flexibility increase (C)	Setup time reductions (D)	Equipment utilization increase (E)	Inventory reduction (F)	Lead time reduction (G)	Marketing advantage (H)	Other (I)	Not applicable (J)
Prime contractor to defense agencies:										
Yes: Percent of products shipped	3,253	5,476	1,785	1,063	771	568	1,118	1,412	216	4,518
1 percent to 24 percent	2,506	4,410	1,423	859	648	461	904	1,208	178	3,641
25 percent to 74 percent	478	665	244	138	70	62	139	94	29	481
75 percent or more	219	304	81	42	28	36	67	81	6	226
Don't know	50	98	37	25	26	9	7	28	3	170
No	6,342	11,956	3,563	1,989	1,741	1,275	2,289	3,917	541	14,721
Don't know	356	711	266	107	111	99	90	203	47	936
Not specified	16	19	2	9	6	2	3	22	1	126
Subcontractor to defense agencies:										
Yes: Percent of products shipped	4,991	8,995	2,708	1,780	1,072	788	2,019	2,867	310	6,314
1 percent to 24 percent	3,157	5,838	1,809	1,019	753	527	1,351	1,906	222	4,391
25 percent to 74 percent	1,055	1,802	567	469	190	111	377	519	69	1,049
75 percent or more	475	772	166	189	88	69	178	284	7	340
Don't know	304	583	166	103	41	80	112	158	12	534
No	2,892	5,236	1,671	803	800	677	942	1,512	215	8,362
Don't know	2,041	3,881	1,204	575	729	480	534	1,138	264	5,425
Not specified	43	50	34	10	27	-	5	37	16	199
Foreign owned ¹ :										
Yes	1,147	1,940	589	364	320	193	402	511	101	1,145
No	8,353	15,431	4,706	2,625	2,152	1,657	2,921	4,836	690	18,568
Don't know	386	680	277	140	124	66	131	147	12	354
Not specified	81	111	44	39	32	28	45	60	1	233

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 5-9. Percentage of Operations Anticipated to be Dependent on Technologically Advanced Inspection and Quality Control Equipment and Software in 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	3,201	2,013	1,303	1,053	1,135	4,428	220
35, Industrial Machinery and Equipment	14,037	3,182	2,370	1,522	1,331	1,475	3,943	212
36, Electronic and Other Electric Equipment	7,004	1,591	1,173	885	816	982	1,448	110
37, Transportation Equipment	4,003	964	518	419	342	435	1,279	47
38, Instruments and Related Products	3,854	1,024	734	470	398	344	843	42
Age of plant:								
Less than 5 years	6,005	1,497	969	668	645	602	1,558	66
5 years to 14 years	13,303	3,221	2,345	1,525	1,271	1,398	3,780	263
15 years to 29 years	12,685	2,856	1,941	1,369	1,175	1,441	3,726	178
30 years or more	9,424	2,339	1,538	1,011	846	920	2,648	123
Not specified	334	48	16	25	4	10	229	1
Number of employees:								
Less than 20	4,955	1,129	475	231	210	115	2,708	87
20 to 99	24,899	6,305	3,850	2,396	1,947	2,414	7,536	450
100 to 499	10,144	2,255	2,051	1,528	1,364	1,355	1,516	76
500 to 999	1,252	174	293	268	236	230	48	2
1,000 or more	801	63	125	172	176	240	16	8
Not specified	199	35	14	4	6	17	117	7
Unionized plants:								
Yes	7,842	2,009	1,174	786	804	780	2,185	104
Contract in effect:								
Yes	7,587	1,992	1,147	761	784	761	2,037	104
No	256	17	28	25	20	18	148	-
No	34,244	7,913	5,627	3,808	3,132	3,584	9,652	527
Not specified	165	39	7	5	3	7	104	-
Percentage of products exported:								
None	12,099	2,438	1,459	896	842	1,079	5,136	249
Less than 10 percent	19,125	5,097	3,163	2,143	1,766	1,982	4,733	241
10 percent to 19 percent	5,653	1,296	1,161	896	656	566	987	90
20 percent to 49 percent	3,925	845	772	482	504	573	731	17
50 percent or more	967	183	190	156	115	131	191	1
Not specified	481	101	63	26	56	39	163	32
Value of goods and services:								
Less than \$750,000	2,078	325	225	85	47	127	1,237	32
\$750,000 to less than \$1 million	1,917	480	242	101	98	76	812	108
\$1 million to less than \$5 million	17,806	4,528	2,429	1,564	1,346	1,593	6,056	291
\$5 million to less than \$10 million	7,853	2,105	1,402	844	673	839	1,886	102
\$10 million to less than \$25 million	6,464	1,482	1,270	986	797	756	1,111	63
\$25 million to less than \$50 million	2,827	587	677	454	407	350	340	12
\$50 million to less than \$100 million	1,467	246	296	258	268	262	128	7
\$100 million or more	1,283	127	227	271	275	333	43	8
Not specified	556	82	40	35	28	34	328	8
Products made to military specifications:								
Yes	16,650	3,538	3,076	2,223	1,957	2,225	3,386	245
No	22,010	5,544	3,121	2,072	1,749	1,845	7,309	370
Don't know	3,350	830	610	298	221	290	1,086	16
Not specified	241	50	1	5	13	11	160	-

See footnotes at end of table.

Table 5-9. Percentage of Operations Anticipated to be Dependent on Technologically Advanced Inspection and Quality Control Equipment and Software in 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than 10 percent (B)	10 percent to 24 percent (C)	25 percent to 49 percent (D)	50 percent to 74 percent (E)	75 percent or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped . . .	11,107	2,556	2,169	1,370	1,276	1,214	2,394	128
1 percent to 24 percent	8,950	2,133	1,720	1,147	978	986	1,880	105
25 percent to 74 percent	1,285	284	279	132	189	126	264	12
75 percent or more	578	107	127	58	78	86	111	11
Don't know	294	31	43	33	32	16	139	-
No	29,173	7,094	4,317	2,999	2,532	2,981	8,813	437
Don't know	1,801	287	320	226	129	165	614	60
Not specified	170	25	3	3	3	10	120	6
Subcontractor to defense agencies:								
Yes: Percent of products shipped . . .	16,971	3,469	3,276	2,259	2,104	2,383	3,322	158
1 percent to 24 percent	11,232	2,456	2,063	1,479	1,227	1,641	2,313	54
25 percent to 74 percent	3,220	525	616	537	606	383	484	69
75 percent or more	1,295	235	379	135	125	245	171	6
Don't know	1,223	253	218	108	147	115	353	29
No	14,929	3,898	1,939	1,374	980	1,134	5,371	232
Don't know	10,057	2,570	1,557	922	847	838	3,089	235
Not specified	294	25	36	43	10	16	159	6
Foreign owned ¹ :								
Yes	3,349	701	693	481	507	441	495	31
No	37,340	8,954	5,837	3,874	3,277	3,694	11,130	574
Don't know	1,142	197	215	203	122	217	171	17
Not specified	420	110	63	40	34	19	145	9

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 5-10. Plans to Acquire Technologically Advanced Inspection and Quality Control Equipment and Software over the Next 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Total replacement (75 percent or more) (B)	Major upgrade (25 percent to less than 75 percent) (C)	Minor upgrade (less than 25 percent) (D)	Under consideration, but no firm plans (E)	Not applicable (F)	Not specified (G)
Major Group:							
34, Fabricated Metal Products.....	13,353	98	1,568	2,213	4,211	5,028	235
35, Industrial Machinery and Equipment ..	14,037	156	1,480	2,712	4,852	4,657	180
36, Electronic and Other Electric Equipment	7,004	107	1,107	1,681	2,254	1,783	71
37, Transportation Equipment	4,003	44	434	757	1,200	1,536	33
38, Instruments and Related Products....	3,854	61	449	947	1,232	1,113	51
Age of plant:							
Less than 5 years.....	6,005	78	720	1,201	1,989	1,947	71
5 years to 14 years	13,803	150	1,755	2,546	4,566	4,594	192
15 years to 29 years	12,685	135	1,583	2,354	4,132	4,299	183
30 years or more	9,424	105	972	2,175	3,034	3,016	123
Not specified.....	334	-	9	36	29	261	-
Number of employees:							
Less than 20	4,955	69	188	389	1,310	2,941	57
20 to 99	24,899	242	2,556	4,151	8,738	8,804	408
100 to 499	10,144	125	1,780	2,862	3,185	2,103	89
500 to 999	1,252	16	293	523	324	90	6
1,000 or more	801	14	205	374	166	33	8
Not specified	199	-	17	11	26	145	-
Unionized plants:							
Yes	7,842	51	935	1,721	2,443	2,589	103
Contract in effect:							
Yes	7,587	51	900	1,685	2,400	2,447	103
No	256	-	35	36	43	142	-
No	34,244	416	4,103	6,582	11,277	11,401	465
Not specified	165	-	1	8	28	127	1
Percentage of products exported:							
None	12,099	98	974	1,508	3,693	5,631	194
Less than 10 percent	19,125	206	2,435	3,925	6,635	5,663	260
10 percent to 19 percent	5,653	70	741	1,670	1,727	1,398	48
20 percent to 49 percent	3,925	56	698	894	1,220	1,014	44
50 percent or more	967	28	158	232	324	224	1
Not specified	481	10	31	80	149	187	23
Value of goods and services:							
Less than \$750,000	2,078	39	101	163	447	1,278	49
\$750,000 to less than \$1 million	1,917	3	107	129	749	887	43
\$1 million to less than \$5 million	17,806	125	1,620	2,742	6,084	7,011	224
\$5 million to less than \$10 million	7,853	159	991	1,613	2,598	2,339	153
\$10 million to less than \$25 million	6,464	82	1,072	1,633	2,125	1,493	61
\$25 million to less than \$50 million	2,827	17	472	914	931	483	10
\$50 million to less than \$100 million	1,467	23	332	496	425	181	8
\$100 million or more	1,283	19	324	589	268	75	8
Not specified	556	-	20	32	120	370	14
Products made to military specifications:							
Yes	16,650	231	2,480	4,009	5,849	3,851	232
No	22,010	220	2,212	3,739	6,646	8,936	256
Don't know	3,350	16	330	555	1,221	1,147	81
Not specified	241	-	17	8	33	183	-

See footnotes at end of table.

Table 5-10. Plans to Acquire Technologically Advanced Inspection and Quality Control Equipment and Software over the Next 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Total replacement (75 percent or more) (B)	Major upgrade (25 percent to less than 75 percent) (C)	Minor upgrade (less than 25 percent) (D)	Under consideration, but no firm plans (E)	Not applicable (F)	Not specified (G)
Prime contractor to defense agencies:							
Yes: Percent of products shipped.....	11,107	153	1,587	2,682	3,721	2,817	148
1 percent to 24 percent	8,950	117	1,322	2,154	2,985	2,280	92
25 percent to 74 percent	1,285	33	167	349	434	289	13
75 percent or more	578	3	65	134	202	160	16
Don't know.....	294	-	33	45	100	88	27
No	29,173	306	3,199	5,308	9,433	10,547	379
Don't know.....	1,801	8	246	314	587	610	36
Not specified.....	170	-	6	7	8	143	6
Subcontractor to defense agencies:							
Yes: Percent of products shipped.....	16,971	223	2,631	4,217	5,757	4,005	138
1 percent to 24 percent	11,232	183	1,738	2,790	3,667	2,777	78
25 percent to 74 percent	3,220	29	553	929	1,036	652	21
75 percent or more	1,295	9	176	318	545	238	9
Don't know.....	1,223	1	164	180	509	339	30
No	14,929	136	1,436	2,369	4,449	6,355	182
Don't know.....	10,057	108	949	1,685	3,491	3,581	243
Not specified.....	294	-	23	39	51	175	6
Foreign owned ¹ :							
Yes	3,349	78	627	846	1,064	688	46
No	37,340	377	4,234	7,001	12,186	13,032	511
Don't know.....	1,142	12	148	352	406	222	3
Not specified.....	420	1	30	111	94	175	8

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Table 5-11. Anticipated Cost to Acquire Technologically Advanced Inspection and Quality Control Equipment and Software over the Next 3 Years by Plant Characteristic

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Major Group:								
34, Fabricated Metal Products	13,353	6,005	1,329	56	9	3	5,779	172
35, Industrial Machinery and Equipment	14,037	6,908	1,693	119	8	10	5,043	256
36, Electronic and Other Electric Equipment	7,004	3,504	1,140	204	47	23	1,985	102
37, Transportation Equipment	4,003	1,522	593	108	29	9	1,680	62
38, Instruments and Related Products	3,854	1,837	586	92	9	9	1,261	59
Age of plant:								
Less than 5 years	6,005	2,939	710	75	5	2	2,170	104
5 years to 14 years	13,803	6,651	1,642	168	9	17	5,099	217
15 years to 29 years	12,685	5,835	1,663	176	41	15	4,789	167
30 years or more	9,424	4,299	1,315	156	46	19	3,425	164
Not specified	334	53	11	4	-	1	265	-
Number of employees:								
Less than 20	4,955	1,758	118	-	-	-	3,012	68
20 to 99	24,899	12,112	2,127	35	1	5	10,199	420
100 to 499	10,144	5,265	2,203	236	34	6	2,255	145
500 to 999	1,252	459	536	114	21	11	102	10
1,000 or more	801	149	341	189	44	33	36	7
Not specified	199	33	17	4	-	-	144	2
Unionized plants:								
Yes	7,842	3,404	1,150	197	42	18	2,893	139
Contract in effect:								
Yes	7,587	3,327	1,124	192	40	18	2,747	139
No	256	78	26	5	2	-	145	-
No	34,244	16,346	4,189	377	59	37	12,725	511
Not specified	165	27	2	5	-	-	130	1
Percentage of products exported:								
None	12,099	4,639	929	65	4	11	6,260	191
Less than 10 percent	19,125	9,633	2,506	233	60	16	6,335	342
10 percent to 19 percent	5,653	2,945	976	103	16	13	1,546	55
20 percent to 49 percent	3,925	1,878	701	139	16	8	1,143	40
50 percent or more	967	500	170	33	5	5	253	1
Not specified	481	180	60	6	-	1	211	23
Value of goods and services:								
Less than \$750,000	2,078	662	28	7	-	-	1,328	53
\$750,000 to less than \$1 million	1,917	836	90	-	-	-	935	55
\$1 million to less than \$5 million	17,806	8,346	1,247	2	-	5	7,881	325
\$5 million to less than \$10 million	7,853	3,990	983	43	1	-	2,747	88
\$10 million to less than \$25 million	6,464	3,453	1,123	111	14	-	1,679	84
\$25 million to less than \$50 million	2,827	1,447	738	74	19	1	528	20
\$50 million to less than \$100 million	1,467	586	567	97	7	8	196	5
\$100 million or more	1,283	305	547	239	59	40	86	8
Not specified	556	151	18	6	1	1	367	12
Products made to military specifications:								
Yes	16,650	8,760	2,594	278	63	22	4,646	288
No	22,010	9,506	2,355	270	35	30	9,485	328
Don't know	3,350	1,469	382	27	3	3	1,431	35
Not specified	241	41	11	4	-	-	186	-

See footnotes at end of table.

Table 5-11. Anticipated Cost to Acquire Technologically Advanced Inspection and Quality Control Equipment and Software over the Next 3 Years by Plant Characteristic—Continued

Plant characteristic	Number of plants (A)	Less than \$100,000 (B)	\$100,000 to less than \$1 million (C)	\$1 million to less than \$5 million (D)	\$5 million to less than \$10 million (E)	\$10 million or more (F)	Not applicable (G)	Not specified (H)
Prime contractor to defense agencies:								
Yes: Percent of products shipped . . .	11,107	5,665	1,696	231	38	22	3,305	150
1 percent to 24 percent	8,950	4,662	1,318	156	23	20	2,654	117
25 percent to 74 percent	1,285	673	225	32	7	1	332	16
75 percent or more	578	219	117	40	5	1	180	17
Don't know	294	112	37	3	2	-	139	-
No	29,173	13,398	3,351	315	61	31	11,556	462
Don't know	1,801	703	287	29	3	2	744	34
Not specified	170	10	7	4	-	-	143	6
Subcontractor to defense agencies:								
Yes: Percent of products shipped . . .	16,971	9,118	2,663	275	70	27	4,640	177
1 percent to 24 percent	11,232	6,204	1,615	170	48	15	3,076	105
25 percent to 74 percent	3,220	1,653	662	53	15	8	785	45
75 percent or more	1,295	684	192	25	3	2	379	10
Don't know	1,223	577	193	26	4	2	401	18
No	14,929	6,132	1,548	172	16	18	6,826	216
Don't know	10,057	4,428	1,119	126	15	10	4,107	252
Not specified	294	98	13	5	-	-	173	6
Foreign owned ¹ :								
Yes	3,349	1,720	734	99	22	14	720	40
No	37,340	17,359	4,276	424	63	34	14,586	597
Don't know	1,142	524	289	45	16	7	255	6
Not specified	420	173	42	10	-	-	186	8

Note: Detail may not add to total due to independent rounding.

- Represents zero.

¹Foreign owned is defined to be an establishment that has 10 percent or more of the voting stock or other equity rights owned directly or indirectly by a foreign entity such as a company, individual, or government.

Appendix A. Report Form

DUE DATE: 30 DAYS AFTER RECEIPT

OMB No. 0607-0720; Approval Expires 09/30/92

FORM **SMT-2**
(8-29-91)U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

SURVEY OF MANUFACTURING TECHNOLOGY

FACTORS AFFECTING ADOPTION

NOTICE - Response to this inquiry is required by law (title 13 U.S. Code). By the same law, your report to the Census Bureau is **confidential**. It may be seen only by sworn Census employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

For correspondence pertaining to this report please refer to Census File Number (CFN)

RETURN
TOBUREAU OF THE CENSUS
Attn: CIR
1201 East 10th Street
Jeffersonville, IN 47132-0001

(Please correct any errors in name, address, and ZIP Code.)

BURDEN HOUR ESTIMATE

Public reporting burden for this collection of information is estimated to be 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Associate Director for Management Services, Paperwork Reduction Project 0607-0720, Room 2027, FB-3, Bureau of the Census, Washington, DC 20233-0001; and to the Office of Management and Budget, Paperwork Reduction Project 0607-0720, Washington, DC 20503.

FILING YOUR REPORT

Your completed report form should be returned to the Bureau of the Census, 1201 East 10th Street, Jeffersonville, IN 47132-0001, Attn: CIR, within 30 days after receipt. Please use the preaddressed return envelope which has been provided.

INSTRUCTIONS

When completing this questionnaire be sure to respond only in reference to the operations at this plant. The questions in section A pertain to the four technology groups listed below. Please use this reference list when completing your report. For each question place a mark (X) in the appropriate row for each column. Be sure to indicate "Not applicable" when a technology group does not apply to your operations. The reference list is provided again at the beginning and the end of section A. Please use the spaces in questions 7, 9, and 10 to specify other responses not already listed that may apply to your plant operations. In section D, please print the name and the title of the person to contact regarding the report. A space is also provided for the contact signature and telephone number.

REFERENCE LIST

A. DESIGN AND ENGINEERING -

- Includes the following technologies:
- (1) Computer Aided Design (CAD) and/or Computer Aided Engineering (CAE)
 - (2) CAD output used to control manufacturing machines (CAD/CAM)
 - (3) Digital representation of CAD output used in procurement activities

B. FABRICATION AND/OR MACHINING -

- Includes the following technologies:
- (1) Flexible Manufacturing Cell(s) (FMC) or Flexible Manufacturing Systems (FMS)
 - (2) NC/CNC machines(s)
 - (3) Materials working laser(s)
 - (4) Pick and place robot(s)
 - (5) Other robots

C. MATERIALS HANDLING -

- Includes the following technologies:
- (1) Automatic Storage and Retrieval System (AS/RS)
 - (2) Automatic Guided Vehicle Systems (AGVS)

D. INSPECTION AND/OR QUALITY CONTROL -

- Includes the following technologies:
- (1) Performed on incoming or in process materials
 - (2) Performed on final product
 - (3) Local area network for technical data
 - (4) Local area network for factory use
 - (5) Intercompany computer network linking subcontractors, suppliers, and/or customers
 - (6) Programmable controller(s)
 - (7) Computer(s) used for control on the factory floor

Section A – TECHNOLOGICALLY ADVANCED EQUIPMENT AND SOFTWARE

REFERENCE LIST

A. DESIGN AND ENGINEERING –

Includes the following technologies:

- (1) Computer Aided Design (CAD) and/or Computer Aided Engineering (CAE)
- (2) CAD output used to control manufacturing machines (CAD/CAM)
- (3) Digital representation of CAD output used in procurement activities

B. FABRICATION AND/OR MACHINING –

Includes the following technologies:

- (1) Flexible Manufacturing Cell(s) (FMC) or Flexible Manufacturing Systems (FMS)
- (2) NC/CNC machines(s)
- (3) Materials working laser(s)
- (4) Pick and place robot(s)
- (5) Other robots

C. MATERIALS HANDLING –

Includes the following technologies:

- (1) Automatic Storage and Retrieval System (AS/RS)
- (2) Automatic Guided Vehicle Systems (AGVS)

D. INSPECTION AND/OR QUALITY CONTROL –

Includes the following technologies:

- (1) Performed on incoming or in process materials
- (2) Performed on final product
- (3) Local area network for technical data
- (4) Local area network for factory use
- (5) Intercompany computer network linking subcontractors, suppliers, and/or customers
- (6) Programmable controller(s)
- (7) Computer(s) used for control on the factory floor

INSTRUCTIONS

Please mark (X) in the appropriate box for EACH column.

NOTE: Questions pertain to this plant only.

	Design and/or Engineering (1)	Fabrication and/or Machining (2)	Materials Handling (3)	Inspection and/or Quality Control (4)
1. What degree do the manufacturing operations in this plant depend on technologically advanced equipment and software?				
a. Less than 10 percent	100 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. 10 percent to 24 percent	101 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. 25 percent to 49 percent	102 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. 50 percent to 74 percent	103 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. 75 percent or more	104 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. Not applicable	105 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
2. Indicate the range that best reflects this plant's total investment in technologically advanced equipment and software for the past three years. Exclude education and training but include plant modifications, construction, integration, and equipment and software purchased or developed.				
a. Less than \$100,000	110 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. \$100,000 to less than \$1 million	111 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. \$1 million to less than \$5 million	112 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. \$5 million to less than \$10 million	113 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. \$10 million or more	114 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. Not applicable	115 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
3. Estimate the average length of time between placement of the order with the vendor to final installation and full operation.				
a. Less than 3 months	120 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. 3 months to less than 6 months	121 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. 6 months to less than 1 year	122 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. 1 year to less than 2 years	123 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. 2 years to less than 3 years	124 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. 3 years or more	125 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
g. Not applicable	126 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

Section A - TECHNOLOGICALLY ADVANCED EQUIPMENT AND SOFTWARE - Continued

Please mark (X) in the appropriate box for EACH column.
NOTE: Questions pertain to this plant only.

	Design and/or Engineering (1)	Fabrication and/or Machining (2)	Materials Handling (3)	Inspection and/or Quality Control (4)
4. Which of the following best describes the impact of technologically advanced equipment and software on education and training costs at this plant.				
a. Increased significantly	130 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Increased moderately	131 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Increased marginally	132 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. No change	133 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. Decreased	134 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. Not applicable	135 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
5. Choose the range that best reflects this plant's cost for education and training related to the use of technologically advanced equipment and software for the last three years.				
a. Less than \$10,000	140 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. \$10,000 to less than \$50,000	141 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. \$50,000 to less than \$100,000	142 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. \$100,000 to less than \$250,000	143 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. \$250,000 to less than \$500,000	144 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. \$500,000 to less than \$1 million	145 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
g. \$1 million to less than \$5 million	146 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
h. \$5 million and over	147 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
i. Not applicable	148 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
6. Have you encountered any problems either in the acquisition or use of technologically advanced equipment or software during the last three years at this plant?	150 1 <input type="checkbox"/> Yes - Go to Item 7 151 1 <input type="checkbox"/> No - Skip to Item 8	2 <input type="checkbox"/> Yes - Go to Item 7 2 <input type="checkbox"/> No - Skip to Item 8	3 <input type="checkbox"/> Yes - Go to Item 7 3 <input type="checkbox"/> No - Skip to Item 8	4 <input type="checkbox"/> Yes - Go to Item 7 4 <input type="checkbox"/> No - Skip to Item 8
7. Indicate the three most significant problems you encountered over the past three years in the acquisition of or use of technologically advanced equipment or software. If more than three were encountered please mark (X) only the three most significant.				
a. Overall cost	160 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Cost of education and training	161 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Worker resistance	162 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Time to develop software	163 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. Cost to develop software	164 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. Increased maintenance expenses	165 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
g. Need for market expansion	166 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
h. Lack of financial justification	167 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
i. Lack of technical support from vendors	168 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
j. Other - Please specify <input checked="" type="checkbox"/>				
(1)	169 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
(2)	170 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
(3)	171 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
(4)	172 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
k. Not applicable	173 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

Section A – TECHNOLOGICALLY ADVANCED EQUIPMENT AND SOFTWARE – Continued

Please mark (X) in the appropriate box for EACH column.

NOTE: Questions pertain to this plant only.

	Design and/or Engineering (1)	Fabrication and/or Machining (2)	Materials Handling (3)	Inspection and/or Quality Control (4)
8. Do you see significant barriers to be overcome before you can proceed with future acquisitions for this plant?	180 <input type="checkbox"/> Yes – Go to Item 9 181 <input type="checkbox"/> No – Skip to Item 10	2 <input type="checkbox"/> Yes – Go to Item 9 2 <input type="checkbox"/> No – Skip to Item 10	3 <input type="checkbox"/> Yes – Go to Item 9 3 <input type="checkbox"/> No – Skip to Item 10	4 <input type="checkbox"/> Yes – Go to Item 9 4 <input type="checkbox"/> No – Skip to Item 10
9. Please indicate the three most significant barriers to acquisition that you see in the next three years. If more than three are identified, please mark (X) only the three most significant.				
a. Cost of equipment	190 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Cost of software	191 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Cost of education and training	192 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Lack of skilled work force	193 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. Insufficient benefits derived	194 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. Union contract	195 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
g. Lack of information on technology	196 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
h. Lack of management support	197 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
i. Incompatible with other equipment	198 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
j. Lack of product marketability	199 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
k. Lack of technical support from vendors	200 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
l. Other – Please specify <input checked="" type="checkbox"/>				
(1)	201 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
(2)	202 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
(3)	203 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
(4)	204 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
m. Not applicable	205 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
10. What benefits have you derived from the use of technologically advanced equipment or software in this plant? Please mark (X) only the three most significant benefits.				
a. Labor cost reduction	210 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Quality improvement	211 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Flexibility increase	212 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Setup time reductions	213 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. Equipment utilization increase	214 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. Inventory reduction	215 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
g. Lead time reduction	216 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
h. Marketing advantage	217 <input type="checkbox"/>	2 <input checked="" type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
i. Other – Please specify <input checked="" type="checkbox"/>				
(1)	218 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
(2)	219 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
(3)	220 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
(4)	221 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
j. Not applicable	222 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

Section A – TECHNOLOGICALLY ADVANCED EQUIPMENT AND SOFTWARE – Continued

Please mark (X) in the appropriate box for EACH column.
NOTE: Questions pertain to this plant only.

	Design and/or Engineering (1)	Fabrication and/or Machining (2)	Materials Handling (3)	Inspection and/or Quality Control (4)
11. What percentage of this plant's operations will depend upon technologically advanced equipment and software in three years?				
a. Less than 10 percent	230 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. 10 percent to 24 percent	231 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. 25 percent to 49 percent	232 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. 50 percent to 74 percent	233 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. 75 percent or more	234 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. Not applicable	235 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
12. What are your plans to acquire technologically advanced equipment and software for this plant over the next three years?				
a. Total replacement (75% or more)	240 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. Major upgrade (25% to less than 75%)	241 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. Minor upgrade (less than 25%)	242 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. Under consideration, but no firm plans	243 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. Not applicable	244 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
13. What range best reflects the anticipated cost of your plans to acquire technologically advanced equipment and software for this plant over the next three years?				
a. Less than \$100,000	250 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
b. \$100,000 to less than \$1 million	251 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
c. \$1 million to less than \$5 million	252 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
d. \$5 million to less than \$10 million	253 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
e. \$10 million or more	254 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
f. Not applicable	255 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

REFERENCE LIST**A. DESIGN AND ENGINEERING –**

Includes the following technologies:

- (1) Computer Aided Design (CAD) and/or Computer Aided Engineering (CAE)
- (2) CAD output used to control manufacturing machines (CAD/CAM)
- (3) Digital representation of CAD output used in procurement activities

B. FABRICATION AND/OR MACHINING –

Includes the following technologies:

- (1) Flexible Manufacturing Cell(s) (FMC) or Flexible Manufacturing Systems (FMS)
- (2) NC/CNC machines(s)
- (3) Materials working laser(s)
- (4) Pick and place robot(s)
- (5) Other robots

C. MATERIALS HANDLING –

Includes the following technologies:

- (1) Automatic Storage and Retrieval System (AS/RS)
- (2) Automatic Guided Vehicle Systems (AGVS)

D. INSPECTION AND/OR QUALITY CONTROL –

Includes the following technologies:

- (1) Performed on incoming or in process materials
- (2) Performed on final product
- (3) Local area network for technical data
- (4) Local area network for factory use
- (5) Intercompany computer network linking subcontractors, suppliers, and/or customers
- (6) Programmable controller(s)
- (7) Computer(s) used for control on the factory floor

Section B - PLANT CHARACTERISTICS

1. How many years has this plant manufactured at this location?	300	1 <input type="checkbox"/> Less than 5 years 2 <input type="checkbox"/> 5 years to 14 years 3 <input type="checkbox"/> 15 years to 29 years 4 <input type="checkbox"/> 30 years or more
2. How many employees do you have at this location?	301	1 <input type="checkbox"/> Less than 20 2 <input type="checkbox"/> 20 to 99 3 <input type="checkbox"/> 100 to 499 4 <input type="checkbox"/> 500 to 999 5 <input type="checkbox"/> 1,000 or more
3. Is this plant unionized either partially or completely?	302	1 <input type="checkbox"/> Yes - Continue with item 4 2 <input type="checkbox"/> No - Skip to item 5
4. Do you have a union contract in effect for your production workers?	303	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
5. What percent of this plant's products are exported?	304	1 <input type="checkbox"/> None 2 <input type="checkbox"/> Less than 10 percent 3 <input type="checkbox"/> 10 percent to 19 percent 4 <input type="checkbox"/> 20 percent to 49 percent 5 <input type="checkbox"/> 50 percent or more
6. What was the total value of all goods and services produced at this plant during 1990?	305	1 <input type="checkbox"/> Less than \$750,000 2 <input type="checkbox"/> \$750,000 to less than \$1 million 3 <input type="checkbox"/> \$1 million to less than \$5 million 4 <input type="checkbox"/> \$5 million to less than \$10 million 5 <input type="checkbox"/> \$10 million to less than \$25 million 6 <input type="checkbox"/> \$25 million to less than \$50 million 7 <input type="checkbox"/> \$50 million to less than \$100 million 8 <input type="checkbox"/> \$100 million or more
7. Are any of the products produced at this plant manufactured to military specifications?	306	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know
8. Are any of the products manufactured at this plant shipped directly to Federal defense agencies such as Department of Defense or any Armed Services?	307	1 <input type="checkbox"/> Yes - Continue with item 9 2 <input type="checkbox"/> No - Skip to item 11 3 <input type="checkbox"/> Don't know - Skip to item 11

Section B - PLANT CHARACTERISTICS - Continued

9. What percentage (based on the value of goods and services) of all products manufactured at this plant are shipped directly to Federal defense agencies annually?	308	1 <input type="checkbox"/> 1 percent to 24 percent 2 <input type="checkbox"/> 25 percent to 74 percent 3 <input type="checkbox"/> Over 75 percent 4 <input type="checkbox"/> Don't know
10. What percentage of these products conform to current standards for electronic product data exchange?	309	1 <input type="checkbox"/> None 2 <input type="checkbox"/> Less than 10 percent 3 <input type="checkbox"/> 10 percent to 19 percent 4 <input type="checkbox"/> 20 percent to 49 percent 5 <input type="checkbox"/> 50 percent to 74 percent 6 <input type="checkbox"/> 75 percent or more 7 <input type="checkbox"/> Don't know
11. Are any of the products manufactured at this plant shipped to other companies that are prime contractors to Federal defense agencies?	310	1 <input type="checkbox"/> Yes - Continue with item 12 2 <input type="checkbox"/> No - Skip to item 13 3 <input type="checkbox"/> Don't know - Skip to item 13
12. What percentage (based on value of goods and services) of all products manufactured at this plant are shipped directly to prime contractors annually?	311	1 <input type="checkbox"/> 1 percent to 24 percent 2 <input type="checkbox"/> 25 percent to 74 percent 3 <input type="checkbox"/> Over 75 percent 4 <input type="checkbox"/> Don't know
13. Does a foreign entity (company, individual, government, etc.) own directly or indirectly 10 percent or more of the voting stock or other equity rights of this plant?	312	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know
14. Please indicate which best describes the organizational position of the person completing this questionnaire?	313	1 <input type="checkbox"/> President 2 <input type="checkbox"/> Vice President 3 <input type="checkbox"/> Treasurer/Secretary 4 <input type="checkbox"/> Comptroller 5 <input type="checkbox"/> Accountant 6 <input type="checkbox"/> Plant Manager 7 <input type="checkbox"/> Plant Engineer 8 <input type="checkbox"/> ADP Manager 9 <input type="checkbox"/> Other - Please Specify <input type="checkbox"/>

NOTES

Section C - VERIFICATION

Please check to ensure that for every question in section A, a response is indicated for each column. Questions 7, 9, and 10 should have three responses for every column. Section B should have one box checked for each question.

This is very important since it affects our ability to process the survey results. **THANK YOU FOR YOUR COOPERATION**

Remarks

Section D - CONTACT

1. Name of person to contact regarding this report – *Please print or type*

2. Title

3. Telephone

Area code Number

Ext.

4. Signature of authorized official

5. Date

Month

Day

Year

Appendix B. Explanation of Terms

DESIGN AND ENGINEERING

Computer-Aided Design (CAD) and/or Computer-Aided Engineering (CAE). Use of computers for drawing and designing parts or products and for analysis and testing of designed parts or products.

Computer-Aided Design (CAD)/Computer-Aided Manufacturing (CAM). Use of CAD output for controlling machines used to manufacture the part or product.

Digital Data Representation. Use of digital representation of CAD output for controlling machines used to manufacture the part or product.

FABRICATION AND MACHINING

NC/CNC Machine. A single machine either numerically controlled (NC) or computer numerically controlled (CNC) with or without automated material handling capabilities. NC machines are controlled by numerical commands, punched on paper or plastic mylar tape, while CNC machines are controlled electronically through a computer residing in the machine.

Flexible Manufacturing Cell (FMC). Two or more machines with automated material handling capabilities controlled by computers or programmable controllers, capable of single path acceptance of raw material and single path delivery of finished product.

Flexible Manufacturing System (FMS). Two or more machines with automated material handling capabilities controlled by computers or programmable controllers, capable of multiple path acceptance of raw material and multiple path delivery of finished product. An FMS may also be comprised of two or more FMCs linked in series or parallel.

Materials Working Laser. Laser technology used for welding, cutting, treating, scribing, and marking.

Pick and Place Robot. A simple robot, with one, two, or three degrees of freedom, which transfers items from place to place by means of point-to-point moves. Little or no trajectory control is available.

Robot. A reprogrammable, multifunctional manipulator designed to move materials, parts, tools, or specialized devices through variable programmed motions for the performance of a variety of tasks.

INSPECTION AND QUALITY CONTROL

Computers Used for Control on the Factory Floor. Excludes computers imbedded within machines, or computers used solely for data acquisitions or monitoring. Includes computers that may be dedicated to control, but which are capable of being reprogrammed for other functions.

Factory Network. Use of local area network (LAN) technology to exchange information between different points on the factory floor.

Programmable Controller. A solid state industrial control device that has programmable memory for storage of instructions, which performs functions equivalent to a relay panel or wired solid state logic control system.

Technical Data Network. Use of Local Area Network (LAN) technology to exchange technical data within design and engineering departments.

MATERIALS HANDLING

Automatic Guided Vehicle System (AGVS). Vehicles equipped with automatic guidance devices programmed to follow a path that interfaces with work stations for automated or manual loading and unloading of materials, tools, parts, or products.

Automatic Storage and Retrieval System (AS/RS). Computer-controlled equipment providing for the automatic handling and storage of materials, parts, subassemblies, or finished products.

NOTE: The definitions and terms for the manufacturing technologies listed above were developed after consultation with several trade associations, primarily the Robotic Industries Association and the Automation Forum. The major government agencies consulted were the International Trade Administration and the National Institute of Standards and Technology.

Appendix C. Sampling and Estimating Methodologies

SAMPLING METHODOLOGY

The estimates within this report are based upon a sample of establishments that were selected randomly. The methodology used to select the original sample is as follows.

The scope of the survey was defined to include all manufacturing establishments classified within U.S. Standard Industrial Classification Code (SIC) major groups 34 to 38 employing 20 or more persons. The 1989 Standard Statistical Establishment List (SSEL) was the basis for identifying the universe. A total of 44,818 establishments were identified as in-scope. For sampling purposes and publication considerations, the universe frame was stratified by three-digit SIC and total employment size classification (SIC(3) x TE). Three TE size breaks were used in the stratification process: 20 to 99, 100 to 499, and 500 or more.

Since the primary intent of the report was to produce estimated establishment counts at stratified and aggregate levels, simple random sampling (SRS) was chosen as the most efficient sampling procedure. In stratified SRS, each stratum is treated as a population from which an independent sample is selected. Each sampling unit (i.e., establishment) within the stratum has an equal chance of being selected. For some of the smaller strata, all establishments were sampled. Of the 44,818 in-scope establishments, a total of 10,088 establishments were selected for the survey.

ESTIMATION

Estimated establishment counts for the various publication level cell categories are derived as the weighted sum of the individual plant counts. Stratum weights (the inverses of the sampling fractions) are adjusted for nonresponse. The weight adjustment procedure, the method of estimation, and the method of variance estimation are described below:

1. Weight Adjustment

Once the survey processing was completed, each of the 10,088 selected establishments was placed into one of three response-related categories: nonrespondents, deaths, and respondents.

The following assumes L strata (strata designation $h = 1, 2, \dots, L$). Each stratum has a population of size N_h from which a sample of size n_h has been selected.

Of those n_h , $n_{h(n)}$ are nonrespondents, $n_{h(d)}$ are deaths, and $n_{h(r)}$ are respondents.

The original stratum weights (W_h) must be adjusted to compensate for nonresponse. The adjustment weight is computed as follows:

$$W_{h(adj)} = W_h \left(\frac{n_h}{n_{h(d)} + n_{h(r)}} \right) = W_h \left(\frac{n_h}{n'_h} \right)$$

where

$W_{h(adj)}$	is the adjusted stratum weight,
$W_h = N_h / n_{h(original)}$	is the original stratum weight,
N_h	denotes the population size of the stratum,
$n_h = n_{h(n)} + n_{h(d)} + n_{h(r)}$	denotes the original sample size of the stratum,
$n'_h = n_{h(d)} + n_{h(r)}$	denotes the adjusted sample size of the stratum,
$n_{h(n)}$	denotes the number of nonrespondents within the stratum,
$n_{h(d)}$	denotes the number of deaths within the stratum,
$n_{h(r)}$	denotes the number of respondents within the stratum.

2. Estimated Counts

Estimated establishment counts for the various publication level cell categories are derived as simple weighted estimates. The inverses of the sampling fractions for the individual strata comprising any given publication level cell are treated as the sampling weights for the respective establishments contained within those strata. Thus, each estimated publication cell total, X'_j , is of the form

$$X'_j = \sum_{h \in j} W_{h(adj)} X_h = \sum_{h \in j} \sum_{i=1}^{n'_h} W_{h(adj)} X_{hi}$$

where

X'_j	is the estimated total establishment count for cell j .
--------	---

n'_h	number of sample cases contained within stratum h (the adjusted sample size),
$W_{h(adj)}$	is the adjusted sampling weight associated with the n'_h establishments of stratum h ,
$X_{ih} = 1$	if establishment i of stratum h satisfies the criteria of interest defined by cell j ,
$= 0$	if it does not.

3. Standard Error Estimates

To estimate the variance of an estimated total, X'_j , for cell j , it is necessary to estimate the variance contribution of each of the individual stratum cells ($SIC(3) \times TE$) which combine to form cell j . The sum of these stratum variances will be the variance for cell j . For a given stratum h , the variance is estimated by

$$\sigma_{X'_h}^2 = n'_h(W_{h(adj)})(W_{h(adj)} - 1)(1 - p_h)(p_h)$$

where n'_h and $W_{h(adj)}$ are defined above, and p_h is the proportion of establishments satisfying the criteria of interest, as defined below.

$$p_h = \frac{\sum_{i=1}^{n'_h} X_{ih}}{n'_h}$$

The following represents the variance of the publication level cell, j .

$$\sigma_{X'_j}^2 = \sum_{h \in j} \sigma_{X'_h}^2$$

Finally, the relative standard error, $V_{X'_j}$, of the estimated total X'_j , the value appearing in the tables, is described below.

$$V_{X'_j} = \frac{\sigma_{X'_j}}{X'_j}$$

LIMITATIONS OF THE DATA

1. Sampling Error

The sample drawn for this survey is but one of many possible samples that could have resulted using the sampling methodology described earlier. Each of these possible samples would likely yield somewhat different estimated establishment counts. The sampling error for a given sample is defined as the difference between the sample estimate and the result theoretically obtainable from a comparable complete canvass of the target population. For this particular sample, this error is unknown. Tables containing relative standard errors

have been provided in appendix D, as a guide to the potential size of the sampling error.

In conjunction with its associated estimate, the standard error can be used to construct confidence intervals about the sample estimate. These intervals allow one to ascribe a probability or confidence that the complete coverage value falls within them. More precisely,

- the interval defined by one standard error above and below the sample estimate can be expected to include the complete coverage value with 67 percent confidence,
- the interval defined by two standard errors above and below the sample estimate can be expected to include the complete coverage value with 95 percent confidence, and
- the interval defined by three standard errors above and below the sample estimate can be expected to include the complete coverage value.

For establishment counts, relative standard errors appear in the tables. To convert a relative standard error to a standard error, use the formula

$$\sigma_{X'} = V_{X'}(X')$$

Then $X' \pm m \sigma_{X'}$ for $m = 1, 2$, and 3 defines the intervals described above.

2. Nonresponse

The original sample of 10,088 cases was drawn to represent a total universe of 44,818 establishments. Some of the establishments originally selected were out-of-business. In order to account for this, the sample was reweighted and the universe estimated at 42,250.

Not all respondents completed the entire questionnaire. Again, no attempt was made to impute for the nonresponse. Instead, a corresponding "not specified" estimate was provided in the table presentations. This means that estimated counts cannot be interpreted as universe estimates unless the "not specified" cell happens to be zero. The tables should therefore, be examined with caution as they are based on reported items only. If the response pattern of such nonresponse had been known, the results may have been different.

Question no. 10 from section B of the questionnaire was eliminated from the survey results due to its ambiguity. This question asked "What percentage of plant products conform to current standards for electronic product data exchange?" Answer categories included "none", "less than 10 percent", "10-19 percent", "20-49 percent", "50-74 percent", "75 percent or more", and "don't know". The majority of

respondents reported "don't know" for this particular question. A number of plants were contacted in an attempt to obtain a better understanding as to why so many plants had reported "don't know". A large number of respondents indicated that they responded "don't know" not because they did not know the percentage of products that conformed to current

standards for electronic product data exchange, but because they did not understand the question. It was also learned that interpretations of the question varied among the plants reporting. Rather than publish estimates that were not truly representative of plant operations, the decision was made to omit this question from the survey results.

Appendix D. Estimates of Relative Standard Errors

Table D-1. Estimates of Relative Standard Errors for Tables in General Summary

Plant characteristic	Relative standard errors for table 1-1			
	A	B	C	D
Less than 10 percent	3.0	2.4	1.7	2.2
10 percent to 24 percent	4.4	3.4	5.1	3.3
25 percent to 49 percent	4.5	3.8	6.6	4.2
50 percent to 74 percent	3.7	4.3	8.5	4.9
75 percent or more	2.6	4.6	7.6	4.6
Not applicable	2.7	2.7	1.8	2.5
Not specified	16.6	17.8	15.8	16.9
Relative standard errors for table 1-2				
Less than \$100,000	1.4	1.9	1.6	1.4
\$100,000 to less than \$1 million	2.7	2.5	5.1	3.6
\$1 million to less than \$5 million	5.4	4.5	7.3	6.6
\$5 million to less than \$10 million	15.4	6.7	13.5	11.3
\$10 million or more	4.2	4.5	6.2	3.7
Not applicable	2.7	2.5	1.7	2.3
Not specified	19.2	19.3	13.9	15.7
Relative standard errors for table 1-3				
Less than 3 months	1.7	2.0	2.2	1.8
3 months to less than 6 months	3.0	2.9	4.4	3.4
6 months to less than 1 year	5.3	3.7	6.1	5.3
1 year to less than 2 years	10.8	7.4	11.7	11.4
2 years to less than 3 years	27.7	24.9	43.8	36.0
3 years or more	40.5	43.4	37.6	44.4
Not applicable	2.2	2.2	1.3	1.8
Not specified	13.0	15.2	10.6	11.3
Relative standard errors for table 1-4				
Increased significantly	3.6	4.2	7.1	5.0
Increased moderately	2.9	3.0	5.5	3.5
Increased marginally	2.9	3.0	4.0	2.9
No change	4.1	3.7	2.9	3.3
Decreased	17.5	18.4	19.8	15.6
Not applicable	2.1	2.0	1.2	1.8
Not specified	17.6	16.4	13.9	16.9
Relative standard errors for table 1-5				
Less than \$10,000	1.8	1.9	2.1	1.8
\$10,000 to less than \$50,000	2.8	3.3	4.7	3.5
\$50,000 to less than \$100,000	5.2	6.0	9.6	6.7
\$100,000 to less than \$250,000	6.6	6.2	10.6	7.8
\$250,000 to less than \$500,000	11.2	8.7	15.2	15.6
\$500,000 to less than \$1 million	8.9	8.5	15.0	6.7
\$1 million to less than \$5 million	4.1	2.8	19.4	8.9
\$5 million or more	24.2	21.8	36.3	34.4
Not applicable	2.3	2.1	1.3	1.9
Not specified	14.7	14.0	11.1	12.2

Table D-1. Estimates of Relative Standard Errors for Tables in General Summary—Continued

Plant characteristic	Relative standard errors for table 1-6			
	A	B	C	D
Encountered problems	2.3	2.3	3.4	2.7
Overall cost	3.0	3.0	4.2	3.4
Cost of education and training	4.4	4.7	6.8	4.9
Worker resistance	6.8	5.9	8.2	6.9
Time to develop software	4.5	5.5	7.2	5.5
Cost to develop software	5.7	7.2	8.2	6.6
Increased maintenance expenses	7.2	5.4	9.8	8.2
Need for market expansion	9.1	7.6	12.3	10.2
Lack of financial justification	4.5	4.4	5.2	4.6
Lack of technical support from vendors	5.8	5.7	9.6	7.2
Other	7.8	7.6	12.3	8.8
Did not encounter problems	1.0	1.1	0.7	0.9
Not specified	15.3	10.4	9.0	10.1
Relative standard errors for table 1-7				
Anticipate barriers	1.9	1.7	2.1	1.9
Cost of equipment	2.2	1.9	2.4	2.3
Cost of software	2.8	3.3	3.7	3.3
Cost of education and training	3.9	3.9	4.9	4.0
Lack of skilled work force	5.3	4.1	6.0	4.9
Lack of benefits	4.5	3.9	3.4	4.1
Union contract	22.3	11.0	11.7	12.1
Lack of technological information	9.5	8.9	7.8	7.9
Lack of management support	5.8	6.5	6.3	6.1
Incompatibility with other equipment	6.9	7.8	8.0	9.1
Lack of product marketability	9.8	8.6	12.1	10.8
Lack of technical support from vendors	11.0	9.9	12.5	11.6
Other	6.9	6.0	7.2	7.2
Do not anticipate barriers	1.3	1.4	1.1	1.2
Not specified	14.2	12.2	10.2	11.3
Relative standard errors for table 1-8				
Labor cost reduction	2.0	1.8	3.0	2.5
Quality improvement	1.6	1.6	3.8	1.6
Flexibility increase	2.3	2.9	4.1	3.4
Setup time reductions	5.0	3.1	7.7	5.2
Equipment utilization increase	5.5	4.5	6.1	5.5
Inventory reduction	8.4	4.7	3.5	5.5
Lead time reduction	2.9	3.5	4.5	4.4
Marketing advantage	3.3	5.2	8.7	3.8
Other	9.3	13.2	11.6	9.8
Not applicable	2.0	1.9	1.0	1.5
Not specified	10.7	12.0	12.0	9.4
Relative standard errors for table 1-9				
Less than 10 percent	3.4	3.0	2.2	2.7
10 percent to 24 percent	4.3	3.4	3.9	3.3
25 percent to 49 percent	4.4	3.5	5.4	3.9
50 percent to 74 percent	3.7	3.8	6.4	4.3
75 percent or more	2.5	4.1	6.7	4.1
Not applicable	2.8	2.7	1.7	2.5
Not specified	14.4	15.5	12.7	13.4
Relative standard errors for table 1-10				
Total replacement (75 percent or more)	8.8	14.6	12.6	13.0
Major upgrade (25 percent to less than 75 percent)	3.4	3.4	5.8	3.8
Minor upgrade (less than 25 percent)	2.4	2.5	3.6	2.7
Under consideration, but no firm plans	2.4	2.2	2.3	2.2
Not applicable	2.5	2.5	1.4	2.1
Not specified	15.8	16.3	12.2	14.1
Relative standard errors for table 1-11				
Less than \$100,000	1.5	2.2	2.0	1.6
\$100,000 to less than \$1 million	3.0	2.3	4.2	3.4
\$1 million to less than \$5 million	5.1	4.1	7.0	6.3
\$5 million to less than \$10 million	11.3	6.4	16.6	17.4
\$10 million or more	9.4	5.2	19.8	14.9
Not applicable	2.3	2.3	1.4	1.9
Not specified	13.3	13.8	10.7	12.1

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering

Plant characteristic	Relative standard errors for table 2-1							
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	5.3	9.9	10.3	9.3	6.5	4.6	29.9
35, Industrial Machinery and Equipment	0.6	6.2	8.4	7.8	6.6	4.5	6.1	40.2
36, Electronic and Other Electric Equipment	0.8	6.0	7.9	8.6	6.6	4.2	6.2	28.4
37, Transportation Equipment	0.9	6.4	9.8	10.1	8.2	5.6	4.9	37.8
38, Instruments and Related Products	0.7	6.9	9.4	8.9	7.8	5.5	6.5	36.5
Age of plant:								
Less than 5 years	3.6	8.8	12.4	13.6	9.4	6.6	8.9	47.5
5 years to 14 years	2.2	6.0	8.4	9.0	7.3	5.3	5.5	30.1
15 years to 29 years	2.3	6.0	8.2	8.1	6.9	5.2	5.9	31.6
30 years or more	2.6	6.3	8.9	7.8	7.5	5.3	6.8	27.3
Not specified	14.2	75.2	84.1	46.3	60.9	33.2	16.1	-
Number of employees:								
Less than 20	4.7	9.7	19.4	25.6	22.1	15.0	7.3	38.5
20 to 99	1.1	4.1	7.2	6.9	6.2	4.3	3.7	23.7
100 to 499	1.4	4.7	5.4	5.3	4.3	3.1	6.4	31.3
500 to 999	2.0	6.3	6.4	5.1	4.2	3.1	16.9	8.2
1,000 or more	1.5	12.3	3.1	2.0	2.6	2.3	4.5	8.9
Not specified	16.4	44.3	55.2	33.8	46.5	43.8	23.9	45.4
Unionized plants:								
Yes	2.8	6.9	9.4	9.4	7.6	4.6	8.0	32.0
Contract in effect:								
Yes	2.8	7.0	9.5	9.6	7.7	4.6	8.0	32.0
No	22.0	45.2	32.5	49.0	36.7	30.5	52.6	-
No	0.7	3.5	5.1	5.2	4.3	3.0	3.1	18.5
Not specified	22.7	62.0	64.3	37.1	81.4	12.1	31.0	45.4
Percentage of products exported:								
None	2.4	6.6	11.6	13.2	12.6	8.5	4.7	38.1
Less than 10 percent	1.6	4.4	6.1	6.2	5.5	4.1	4.6	22.6
10 percent to 19 percent	3.1	7.8	10.0	10.2	7.2	5.8	9.9	40.2
20 percent to 49 percent	3.6	12.1	11.3	10.7	8.3	5.6	14.1	39.2
50 percent or more	7.1	23.0	23.0	20.0	19.7	9.2	35.4	-
Not specified	12.5	28.3	39.8	35.0	39.6	32.7	18.8	87.1
Value of goods and services:								
Less than \$750,000	7.4	15.1	30.8	34.4	30.7	27.3	10.4	56.2
\$750,000 to less than \$1 million	7.8	15.3	32.1	34.7	32.0	22.9	12.0	94.1
\$1 million to less than \$5 million	1.7	4.8	8.7	9.0	8.4	6.0	4.3	29.6
\$5 million to less than \$10 million	3.1	7.8	10.6	11.2	9.5	6.4	8.1	36.5
\$10 million to less than \$25 million	2.5	7.0	7.4	7.7	6.1	4.9	9.2	30.7
\$25 million to less than \$50 million	3.1	10.0	8.8	9.7	6.7	5.0	16.7	34.2
\$50 million to less than \$100 million	3.0	10.9	9.7	8.5	6.4	4.7	12.7	58.8
\$100 million or more	1.9	8.8	7.4	3.1	4.2	2.7	15.9	7.6
Not specified	11.9	27.4	49.0	31.8	33.0	25.2	17.7	55.6
Products made to military specifications:								
Yes	1.8	5.1	7.1	7.0	5.7	4.4	5.6	25.7
No	1.4	4.3	6.2	6.3	5.5	3.7	3.9	23.1
Don't know	5.2	12.9	18.3	18.9	15.3	10.1	10.5	62.5
Not specified	17.9	50.5	79.4	38.9	57.9	60.2	23.6	-

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-1—Continued							
	A	B	C	D	E	F	G	H
Prime contractor to defense agencies:								
Yes: Percent of products shipped . . .	2.3	6.4	7.7	7.4	6.0	4.7	7.6	27.7
1 percent to 24 percent	2.7	7.2	8.9	8.4	7.0	5.3	8.7	31.9
25 percent to 74 percent	7.2	16.4	20.8	22.8	15.8	13.7	22.6	47.7
75 percent or more	9.3	22.4	21.0	27.1	18.7	17.1	26.7	-
Don't know	16.9	29.1	24.1	32.3	28.5	25.3	38.9	-
No	1.0	3.7	5.7	5.9	5.1	3.4	3.3	20.8
Don't know	6.7	18.4	19.5	20.2	16.4	11.6	14.4	27.2
Not specified	21.1	78.8	96.2	41.1	81.4	91.5	25.9	-
Subcontractor to defense agencies:								
Yes: Percent of products shipped . . .	1.8	5.4	7.0	7.0	5.7	4.2	6.1	26.5
1 percent to 24 percent	2.5	6.7	8.6	8.2	7.1	5.2	7.8	38.7
25 percent to 74 percent	5.1	12.8	14.9	17.1	12.3	9.6	14.5	38.8
75 percent or more	9.4	25.3	31.4	30.2	22.5	17.2	23.5	60.3
Don't know	9.2	17.4	25.3	30.5	25.4	18.7	20.3	51.2
No	2.0	5.1	8.0	8.2	7.0	4.9	4.5	25.7
Don't know	2.6	6.5	9.0	8.9	7.5	5.5	6.1	37.8
Not specified	17.4	51.0	69.5	41.1	46.9	51.9	22.5	-
Foreign owned:								
Yes	4.2	11.0	11.2	13.5	8.8	8.0	12.9	55.8
No	0.6	3.2	4.9	4.9	4.2	2.9	2.9	17.6
Don't know	6.1	15.1	18.1	22.9	12.2	10.9	16.4	33.5
Not specified	14.6	35.7	40.9	28.4	36.1	29.5	24.5	84.4
	Relative standard errors for table 2-2							
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	2.9	7.4	17.4	77.5	21.5	4.5	33.5
35, Industrial Machinery and Equipment	0.6	2.4	4.9	11.3	14.4	13.7	6.0	61.1
36, Electronic and Other Electric Equipment	0.8	2.8	4.8	10.5	16.9	2.9	6.0	38.7
37, Transportation Equipment	0.9	3.6	5.8	7.7	12.3	6.3	4.7	34.1
38, Instruments and Related Products	0.7	3.2	5.8	9.4	17.5	12.2	6.4	40.9
Age of plant:								
Less than 5 years	3.6	5.1	7.4	18.1	70.4	24.4	8.9	56.3
5 years to 14 years	2.2	3.3	5.9	10.6	17.2	4.3	5.3	33.4
15 years to 29 years	2.3	3.5	5.1	10.4	14.8	4.8	5.7	41.4
30 years or more	2.6	4.0	4.8	5.6	7.3	2.5	6.5	32.2
Not specified	14.2	30.1	14.4	39.8	17.0	17.0	17.0	50.9
Number of employees:								
Less than 20	4.7	7.1	27.3	58.4	-	-	7.0	38.2
20 to 99	1.1	2.1	5.8	21.5	88.5	72.1	3.6	29.1
100 to 499	1.4	2.3	3.0	9.3	23.6	30.6	6.2	36.7
500 to 999	2.0	4.2	2.7	4.0	17.4	4.5	15.7	6.4
1,000 or more	1.5	8.2	2.2	2.7	5.0	1.9	3.0	6.5
Not specified	16.4	27.7	36.6	47.4	-	-	24.3	76.0
Unionized plants:								
Yes	2.8	4.3	4.4	8.4	7.8	3.7	7.6	32.5
Contract in effect:								
Yes	2.8	4.4	4.4	8.5	7.9	3.7	7.7	32.5
No	22.0	28.6	33.5	5.9	9.2	-	50.5	-
No	0.7	1.7	3.3	6.7	22.8	6.8	3.1	23.0
Not specified	22.7	38.5	52.1	13.2	-	-	30.5	53.1
Percentage of products exported:								
None	2.4	4.2	10.7	27.8	20.6	13.2	4.7	31.2
Less than 10 percent	1.6	2.5	4.2	9.6	38.3	3.3	4.4	26.9
10 percent to 19 percent	3.1	4.5	5.8	11.7	23.8	4.0	9.4	39.9
20 percent to 49 percent	3.6	5.7	5.8	8.4	11.1	10.7	13.5	11.1
50 percent or more	7.1	11.6	11.9	13.8	38.6	5.3	32.8	9.9
Not specified	12.5	18.1	31.9	35.6	81.2	12.1	19.6	76.0

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-2—Continued							
	A	B	C	D	E	F	G	H
Value of goods and services:								
Less than \$750,000	7.4	11.5	35.6	12.8	-	-	10.4	95.2
\$750,000 to less than \$1 million	7.8	11.0	39.3	-	-	-	12.3	49.5
\$1 million to less than \$5 million	1.7	2.7	8.8	30.8	97.8	-	4.2	31.9
\$5 million to less than \$10 million	3.1	4.2	8.2	35.4	60.7	72.1	7.8	48.0
\$10 million to less than \$25 million	2.5	3.5	4.7	16.1	37.2	-	8.8	37.6
\$25 million to less than \$50 million	3.1	5.2	4.5	11.3	33.9	7.2	16.2	51.0
\$50 million to less than \$100 million	3.0	5.8	4.5	7.6	18.4	19.8	12.2	7.5
\$100 million or more	1.9	6.3	3.2	3.0	7.4	3.6	14.3	5.2
Not specified	11.9	17.8	27.3	26.9	-	15.1	17.6	57.1
Products made to military specifications:								
Yes	1.8	2.9	4.3	7.7	7.5	5.4	5.4	28.6
No	1.4	2.4	3.9	8.1	32.2	7.1	3.9	25.5
Don't know	5.2	7.7	11.9	23.1	22.3	19.0	9.9	68.0
Not specified	17.9	31.2	61.5	18.2	-	-	23.6	76.0
Prime contractor to defense agencies:								
Yes: Percent of products shipped	2.3	3.5	4.4	6.9	6.3	5.6	7.4	31.4
1 percent to 24 percent	2.7	3.9	5.0	9.7	10.0	11.3	8.5	49.8
25 percent to 74 percent	7.2	11.0	12.1	10.2	11.8	5.3	22.2	42.5
75 percent or more	9.3	16.4	10.1	11.7	9.7	4.4	27.8	48.1
Don't know	16.9	19.5	23.2	29.5	12.9	10.9	37.5	-
No	1.0	2.0	3.7	8.4	26.7	7.0	3.2	22.8
Don't know	6.7	10.0	12.2	12.6	26.2	9.3	13.5	27.2
Not specified	21.1	42.0	91.5	13.2	-	-	25.7	76.0
Subcontractor to defense agencies:								
Yes: Percent of products shipped	1.8	2.8	4.3	7.6	7.1	4.5	5.9	29.6
1 percent to 24 percent	2.5	3.6	5.3	10.4	9.3	5.7	7.5	39.7
25 percent to 74 percent	5.1	7.5	9.0	13.4	10.0	3.9	13.9	41.6
75 percent or more	9.4	14.5	16.3	26.6	26.9	20.2	22.4	-
Don't know	9.2	12.9	18.4	18.2	34.3	10.1	20.7	-
No	2.0	3.1	5.1	9.9	38.4	11.3	4.5	30.5
Don't know	2.6	3.8	5.6	12.2	17.1	10.2	5.9	36.0
Not specified	17.4	31.1	37.0	70.0	-	13.2	22.7	76.0
Foreign owned:								
Yes	4.2	6.4	6.9	14.1	31.0	17.4	12.2	39.7
No	0.6	1.6	3.1	6.4	20.4	4.1	2.9	19.8
Don't know	6.1	10.2	9.0	10.7	14.4	6.5	15.7	11.0
Not specified	14.6	24.1	27.2	44.6	13.2	13.2	24.3	76.0
Relative standard errors for table 2-3								
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	3.6	7.7	15.3	35.0	55.2	11.5	3.8
35, Industrial Machinery and Equipment	0.6	2.9	5.7	9.4	15.2	49.2	7.0	4.7
36, Electronic and Other Electric Equipment	0.8	3.3	5.1	9.0	25.2	33.7	63.6	4.7
37, Transportation Equipment	0.9	4.3	6.7	9.4	8.1	42.8	13.2	4.1
38, Instruments and Related Products	0.7	4.0	6.1	10.5	18.3	46.4	70.1	5.0
Age of plant:								
Less than 5 years	3.6	5.3	9.0	17.9	28.3	55.7	-	7.3
5 years to 14 years	2.2	3.8	6.0	10.7	23.9	58.2	24.6	4.6
15 years to 29 years	2.3	3.9	5.6	9.7	12.0	33.2	15.5	4.8
30 years or more	2.6	4.6	5.4	8.5	21.0	33.6	44.5	5.4
Not specified	14.2	36.5	34.3	77.6	14.4	-	-	16.2

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-3—Continued								
	A	B	C	D	E	F	G	H	I
Number of employees:									
Less than 20	4.7	8.4	23.7	37.6	57.3	97.5	24.6	6.5	34.2
20 to 99	1.1	2.5	6.1	12.1	27.8	44.7	96.0	3.1	18.5
100 to 499	1.4	2.6	3.4	6.2	13.6	29.6	70.0	4.4	20.8
500 to 999	2.0	4.0	2.9	5.0	8.0	8.7	9.8	9.2	15.6
1,000 or more	1.5	5.7	2.3	1.4	2.6	6.7	30.2	2.5	6.2
Not specified	16.4	31.4	45.5	60.8	-	-	77.3	22.8	-
Unionized plants:									
Yes.....	2.8	5.1	5.4	7.7	11.6	41.6	58.7	6.0	21.1
Contract in effect:									
Yes.....	2.8	5.2	5.4	5.9	11.6	41.6	58.7	6.0	21.8
No	22.0	29.1	25.2	75.3	-	-	-	45.0	86.7
No	0.7	2.0	3.6	6.6	14.8	33.8	35.0	2.5	14.6
Not specified	22.7	39.7	24.5	61.7	-	-	-	31.6	26.7
Percentage of products exported:									
None	2.4	4.9	11.4	18.0	47.4	62.7	8.3	4.2	27.1
Less than 10 percent.....	1.6	2.9	4.3	7.9	14.4	46.8	64.2	3.7	16.2
10 percent to 19 percent.....	3.1	4.9	6.4	9.1	16.8	29.5	86.9	7.3	25.9
20 percent to 49 percent.....	3.6	5.7	6.8	11.2	20.9	-	6.2	9.8	26.7
50 percent or more.....	7.1	10.8	14.2	17.6	24.8	61.8	-	19.5	52.6
Not specified	12.5	24.3	25.6	57.6	42.0	20.1	77.3	17.7	-
Value of goods and services:									
Less than \$750,000	7.4	13.7	31.7	12.5	9.2	-	-	9.6	46.1
\$750,000 to less than \$1 million	7.8	12.9	34.6	57.4	91.7	-	89.1	11.4	39.4
\$1 million to less than \$5 million	1.7	3.3	8.6	16.1	32.7	60.6	-	3.6	27.9
\$5 million to less than \$10 million.....	3.1	4.8	8.7	16.6	32.2	68.2	86.9	6.5	24.2
\$10 million to less than \$25 million.....	2.5	3.9	5.1	9.8	18.9	36.5	13.2	6.5	22.3
\$25 million to less than \$50 million.....	3.1	5.6	5.3	8.6	22.2	38.8	-	9.9	32.3
\$50 million to less than \$100 million.....	3.0	5.8	4.6	7.3	15.4	39.8	9.2	9.8	28.3
\$100 million or more	1.9	5.2	2.6	3.5	2.3	6.2	30.2	9.0	5.0
Not specified	11.9	23.7	38.9	28.9	50.2	-	77.3	15.9	53.0
Products made to military specifications:									
Yes.....	1.8	3.2	4.5	8.0	14.9	47.3	57.1	4.5	23.5
No	1.4	2.7	4.3	7.4	16.4	38.1	42.7	3.2	16.6
Don't know	5.2	8.6	13.4	25.7	28.9	64.8	24.6	8.5	44.0
Not specified	17.9	35.4	63.6	74.9	-	-	-	22.7	-
Prime contractor to defense agencies:									
Yes: Percent of products shipped	2.3	3.8	5.0	8.6	16.4	45.5	20.6	5.9	24.1
1 percent to 24 percent.....	2.7	4.2	5.8	11.2	18.8	52.4	29.9	6.8	32.0
25 percent to 74 percent.....	7.2	12.2	13.2	13.1	18.1	13.0	17.0	17.7	31.3
75 percent or more.....	9.3	13.4	19.8	11.6	48.2	60.5	10.0	20.5	48.1
Don't know.....	16.9	19.8	30.4	7.4	14.3	-	-	34.1	-
No	1.0	2.3	4.0	7.1	14.6	34.0	63.3	2.7	16.0
Don't know	6.7	10.8	9.7	13.4	37.4	-	10.3	11.7	44.1
Not specified	21.1	43.8	90.0	74.4	-	-	-	24.9	-
Subcontractor to defense agencies:									
Yes: Percent of products shipped	1.8	3.1	4.6	7.5	19.9	50.5	66.5	4.8	23.5
1 percent to 24 percent.....	2.5	3.9	6.0	9.6	13.9	31.2	83.5	6.3	31.4
25 percent to 74 percent.....	5.1	7.9	9.3	13.4	67.8	75.3	-	11.4	39.6
75 percent or more.....	9.4	15.1	15.3	31.6	55.2	56.4	7.1	20.2	45.4
Don't know.....	9.2	14.0	23.6	25.6	36.0	-	17.0	15.8	73.4
No	2.0	3.7	5.5	9.3	15.7	35.8	10.7	3.8	20.2
Don't know	2.6	4.4	6.2	12.3	19.7	61.0	40.7	4.9	22.3
Not specified	17.4	35.9	23.7	62.2	13.2	-	-	20.5	-
Foreign owned:									
Yes.....	4.2	7.1	8.1	10.5	23.6	42.9	11.8	9.6	26.1
No	0.6	1.9	3.4	6.2	13.2	31.1	45.9	2.4	14.1
Don't know	6.1	11.5	8.9	14.4	24.3	24.8	9.9	12.5	15.1
Not specified	14.6	26.1	22.4	49.2	6.9	83.4	-	21.4	96.9
See footnote at end of table.									

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-4							
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products.....	0.7	8.5	7.0	6.1	8.7	40.9	3.7	36.4
35, Industrial Machinery and Equipment	0.6	6.5	5.0	5.4	7.8	28.3	4.6	34.6
36, Electronic and Other Electric Equipment	0.8	6.3	5.2	5.0	7.0	28.7	4.7	41.8
37, Transportation Equipment	0.9	8.0	5.9	6.3	9.5	73.4	3.9	27.4
38, Instruments and Related Products	0.7	8.0	5.8	6.1	9.1	34.9	5.0	45.9
Age of plant:								
Less than 5 years.....	3.6	10.1	7.6	8.0	11.0	47.4	7.1	55.2
5 years to 14 years.....	2.2	7.5	6.0	5.8	7.3	26.7	4.5	32.5
15 years to 29 years	2.3	7.0	5.6	5.5	7.4	25.7	4.8	33.5
30 years or more.....	2.6	6.5	5.5	6.1	9.6	33.7	5.4	24.7
Not specified	14.2	45.2	46.7	47.6	71.3	-	16.2	62.1
Number of employees:								
Less than 20	4.7	19.4	18.1	18.5	13.6	56.1	6.1	33.2
20 to 99	1.1	6.1	4.9	4.5	5.7	25.7	3.0	26.6
100 to 499	1.4	4.4	3.2	3.7	5.8	20.8	4.8	33.0
500 to 999	2.0	4.4	2.8	4.3	5.7	46.5	12.5	12.1
1,000 or more	1.5	2.2	2.0	3.9	14.8	8.6	3.3	8.0
Not specified	16.4	39.6	32.4	41.7	46.7	-	22.7	-
Unionized plants:								
Yes.....	2.8	6.6	5.4	6.5	10.7	28.6	6.1	30.8
Contract in effect:								
Yes.....	2.8	6.7	5.5	6.6	10.7	28.6	6.2	30.8
No	22.0	33.4	27.7	34.6	72.4	-	39.5	-
No	0.7	4.3	3.4	3.3	4.5	19.8	2.5	19.6
Not specified	22.7	74.4	33.6	45.5	-	-	26.8	26.7
Percentage of products exported:								
None	2.4	10.8	8.9	9.1	9.5	36.6	4.1	33.5
Less than 10 percent.....	1.6	5.5	4.4	4.3	6.0	23.5	3.6	23.2
10 percent to 19 percent.....	3.1	7.8	6.5	6.3	9.7	48.7	7.3	45.6
20 percent to 49 percent.....	3.6	8.1	6.6	7.6	10.3	43.0	11.3	71.7
50 percent or more.....	7.1	13.2	11.4	15.3	27.7	-	22.2	-
Not specified	12.5	29.9	36.8	27.3	41.4	-	17.4	95.2
Value of goods and services:								
Less than \$750,000	7.4	37.3	28.4	26.4	23.5	-	9.1	45.8
\$750,000 to less than \$1 million	7.8	31.1	30.7	27.3	19.3	87.6	10.4	50.9
\$1 million to less than \$5 million.....	1.7	7.8	6.5	6.3	6.6	33.9	3.5	33.5
\$5 million to less than \$10 million.....	3.1	9.1	7.5	7.0	10.3	32.9	6.5	40.7
\$10 million to less than \$25 million....	2.5	6.8	4.9	5.1	8.1	40.6	6.9	34.6
\$25 million to less than \$50 million....	3.1	6.9	5.4	6.6	10.6	23.0	11.6	40.4
\$50 million to less than \$100 million....	3.0	6.5	4.9	6.2	11.8	44.4	10.7	19.1
\$100 million or more	1.9	3.6	1.9	4.3	12.3	9.2	15.3	26.9
Not specified	11.9	26.2	28.9	32.3	41.8	93.1	15.9	58.4
Products made to military specifications:								
Yes.....	1.8	5.8	4.7	4.8	6.8	25.8	4.4	31.1
No	1.4	5.3	4.2	4.2	5.6	25.0	3.2	22.6
Don't know.....	5.2	14.1	12.7	11.7	16.0	77.0	9.0	61.5
Not specified	17.9	70.4	37.2	50.2	55.0	-	22.4	-

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-4—Continued										
	A	B	C	D	E	F	G	H			
Prime contractor to defense agencies:											
Yes: Percent of products shipped . . .	2.3	6.2	5.0	5.2	7.5	27.6	5.9	33.6			
1 percent to 24 percent	2.7	7.1	5.8	5.9	8.6	36.6	6.7	43.5			
25 percent to 74 percent	7.2	18.7	12.0	13.2	18.1	55.5	18.3	49.5			
75 percent or more	9.3	18.2	19.3	18.9	24.5	60.7	20.0	13.8			
Don't know	16.9	29.3	25.8	27.4	30.6	93.1	35.5	-			
No	1.0	4.8	3.8	3.8	5.0	23.5	2.6	20.1			
Don't know	6.7	12.1	13.8	13.7	19.2	43.0	12.5	77.1			
Not specified	21.1	70.4	49.0	68.0	85.5	-	24.5	-			
Subcontractor to defense agencies:											
Yes: Percent of products shipped . . .	1.8	5.6	4.6	4.8	6.8	23.7	4.8	25.8			
1 percent to 24 percent	2.5	6.8	5.7	5.8	8.6	24.6	6.1	38.7			
25 percent to 74 percent	5.1	12.7	9.9	11.3	15.8	43.5	11.3	42.1			
75 percent or more	9.4	21.3	20.9	22.1	23.0	68.2	20.1	86.7			
Don't know	9.2	29.2	18.7	19.3	23.1	59.0	17.1	50.9			
No	2.0	6.8	5.5	5.4	6.8	26.6	3.8	26.8			
Don't know	2.6	7.7	6.3	6.0	8.8	35.8	4.9	37.6			
Not specified	17.4	37.3	42.5	49.5	96.9	-	21.4	-			
Foreign owned:											
Yes	4.2	11.2	7.5	8.6	13.4	59.4	10.0	44.2			
No	0.6	4.0	3.2	3.2	4.4	19.2	2.3	19.3			
Don't know	6.1	16.7	10.6	11.0	19.7	61.9	14.0	9.0			
Not specified	14.6	32.8	28.2	42.0	44.5	68.9	22.0	80.6			
	Relative standard errors for table 2-5										
	A	B	C	D	E	F	G	H	I	J	K
Major Group:											
34, Fabricated Metal Products	0.7	3.8	7.0	16.9	25.6	49.4	-	74.1	92.5	3.9	27.8
35, Industrial Machinery and Equipment	0.6	3.2	5.1	9.7	10.8	26.2	16.3	6.7	11.2	5.0	31.0
36, Electronic and Other Electric Equipment	0.8	3.5	5.0	8.7	13.8	20.2	21.7	6.9	8.1	5.0	33.7
37, Transportation Equipment	0.9	4.5	6.6	9.7	11.3	7.5	4.2	5.1	7.7	4.2	27.9
38, Instruments and Related Products	0.7	4.6	5.6	10.5	11.6	13.7	17.4	4.0	4.5	5.3	27.4
Age of plant:											
Less than 5 years	3.6	5.9	7.6	12.7	25.8	31.2	48.6	15.3	92.5	7.6	36.0
5 years to 14 years	2.2	3.9	5.8	10.6	14.1	25.3	25.1	8.1	15.3	4.7	26.3
15 years to 29 years	2.3	4.0	5.6	10.4	12.4	16.6	10.2	8.2	7.7	5.0	27.2
30 years or more	2.6	4.7	5.6	8.2	6.9	13.5	2.7	5.7	5.0	5.7	30.6
Not specified	14.2	41.7	49.2	51.6	79.0	17.0	-	-	17.0	16.4	54.8
Number of employees:											
Less than 20	4.7	8.9	17.6	74.4	96.0	-	-	-	92.5	6.4	28.9
20 to 99	1.1	2.7	5.0	12.5	21.6	44.7	81.2	-	-	3.1	22.3
100 to 499	1.4	2.8	3.1	6.4	9.7	19.1	39.6	39.1	-	5.1	23.3
500 to 999	2.0	4.6	2.9	4.2	6.2	8.4	27.7	5.9	-	14.3	6.5
1,000 or more	1.5	8.7	1.5	5.0	2.9	2.0	2.2	2.8	4.2	3.5	9.1
Not specified	16.4	33.3	23.4	51.6	54.2	-	-	-	-	22.7	69.1
Unionized plants:											
Yes	2.8	4.9	6.2	7.5	7.4	14.0	2.6	6.4	6.1	6.6	37.8
Contract in effect:											
Yes	2.8	4.9	6.3	7.6	7.5	14.2	2.6	6.9	6.1	6.6	37.8
No	22.0	35.7	34.7	50.9	38.2	9.2	14.7	10.0	-	40.2	-
No	0.7	2.2	3.3	6.4	9.0	14.8	14.2	5.0	36.1	2.6	16.0
Not specified	22.7	50.7	57.4	39.4	55.7	-	-	-	-	28.5	56.0
Percentage of products exported:											
None	2.4	5.1	9.9	17.1	26.9	49.2	22.7	8.5	9.5	4.2	26.4
Less than 10 percent	1.6	2.9	4.3	8.5	12.0	12.1	8.7	7.5	65.2	3.8	21.6
10 percent to 19 percent	3.1	5.3	5.9	11.0	9.8	27.0	29.7	15.1	9.8	7.6	28.9
20 percent to 49 percent	3.6	6.1	6.4	11.3	10.5	16.9	13.5	4.3	8.5	12.1	49.8
50 percent or more	7.1	12.5	13.1	21.6	19.4	31.9	27.4	9.2	9.5	26.0	41.6
Not specified	12.5	22.7	40.1	30.9	61.0	12.1	-	20.1	-	17.7	58.4

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-5—Continued										
	A	B	C	D	E	F	G	H	I	J	K
Value of goods and services:											
Less than \$750,000	7.4	13.6	27.2	61.8	78.9	-	12.8	-	-	9.6	40.2
\$750,000 to less than \$1 million	7.8	13.8	30.2	66.1	12.6	81.2	-	-	-	10.8	43.0
\$1 million to less than \$5 million	1.7	3.5	6.6	17.9	37.8	75.5	-	-	92.5	3.7	26.0
\$5 million to less than \$10 million	3.1	4.9	7.7	18.9	25.2	47.0	-	-	-	6.7	41.7
\$10 million to less than \$25 million	2.5	4.1	4.9	9.5	15.7	32.2	42.8	-	-	7.3	30.0
\$25 million to less than \$50 million	3.1	5.9	5.1	8.4	11.9	25.4	-	28.1	-	12.6	37.5
\$50 million to less than \$100 million	3.0	6.3	5.2	7.1	8.3	17.6	22.2	12.8	-	11.1	28.3
\$100 million or more	1.9	6.8	2.9	4.4	4.5	3.1	9.2	2.7	4.3	16.8	24.2
Not specified	11.9	23.6	26.3	36.2	69.5	17.0	17.0	-	20.1	16.3	63.7
Products made to military specifications:											
Yes	1.8	3.5	4.5	8.3	9.2	14.8	6.9	4.6	5.2	4.7	24.9
No	1.4	2.9	4.2	6.9	10.2	18.4	21.0	9.2	43.2	3.3	18.8
Don't know	5.2	8.6	12.1	19.7	13.9	18.1	7.5	12.5	-	9.2	69.2
Not specified	17.9	39.5	54.5	51.6	79.1	-	-	-	-	22.5	33.5
Prime contractor to defense agencies:											
Yes: Percent of products shipped	2.3	4.1	4.8	9.0	9.2	14.8	7.7	4.6	5.7	6.3	30.0
1 percent to 24 percent	2.7	4.5	5.4	10.3	12.6	23.0	11.3	7.8	10.0	7.1	43.3
25 percent to 74 percent	7.2	12.0	14.6	25.1	12.6	17.8	22.9	6.3	20.2	19.6	41.0
75 percent or more	9.3	17.3	22.3	17.9	11.7	4.2	6.1	6.1	7.0	23.3	42.3
Don't know	16.9	20.8	27.4	49.4	43.8	7.2	12.9	17.0	10.9	34.7	-
No	1.0	2.5	3.8	6.8	9.8	18.0	18.6	9.0	6.6	2.8	17.3
Don't know	6.7	10.5	13.8	18.6	16.3	16.9	5.9	-	80.9	12.9	39.6
Not specified	21.1	54.4	91.5	51.6	91.5	-	-	-	-	24.5	56.0
Subcontractor to defense agencies:											
Yes: Percent of products shipped	1.8	3.4	4.4	7.7	9.0	14.5	9.6	4.8	5.2	5.0	29.3
1 percent to 24 percent	2.5	4.3	5.5	9.5	10.6	20.0	12.6	4.2	6.7	6.4	44.3
25 percent to 74 percent	5.1	8.6	9.5	15.1	20.7	20.9	17.5	5.7	7.0	12.1	38.8
75 percent or more	9.4	15.8	19.4	26.8	34.6	7.0	4.8	26.7	34.9	20.7	17.5
Don't know	9.2	15.5	16.7	19.2	36.1	14.2	21.8	9.0	9.2	17.4	68.8
No	2.0	3.7	5.6	9.4	13.9	21.1	23.0	8.5	8.5	3.9	19.9
Don't know	2.6	4.4	6.2	11.2	9.6	12.0	3.7	12.3	64.6	5.1	32.2
Not specified	17.4	41.0	68.5	49.4	79.1	13.2	-	-	-	22.0	56.0
Foreign owned:											
Yes	4.2	7.6	7.0	11.4	16.8	23.0	49.7	8.3	24.8	10.3	30.9
No	0.6	2.0	3.2	6.1	7.8	13.3	7.0	4.6	26.2	2.4	15.6
Don't know	6.1	10.2	14.1	13.9	13.1	7.4	9.6	10.4	24.8	14.9	41.0
Not specified	14.6	26.1	32.3	33.7	59.4	12.1	-	17.0	-	22.5	56.0
Relative standard errors for table 2-6											
	A	B	C	D	E	F	G	H	I	J	
Major Group:											
34, Fabricated Metal Products	6.8	10.5	12.6	11.2	13.5	19.7	18.0	10.2	14.9	17.8	
35, Industrial Machinery and Equipment	5.5	7.8	13.2	8.5	9.8	12.7	15.8	8.0	10.0	14.0	
36, Electronic and Other Electric Equipment	5.4	8.1	13.0	7.9	10.0	11.8	17.5	8.0	10.1	14.4	
37, Transportation Equipment	5.9	7.9	14.0	9.2	12.7	13.8	21.0	8.3	11.4	12.6	
38, Instruments and Related Products	6.2	9.4	15.4	9.2	11.2	13.6	20.5	9.3	13.0	13.7	
Age of plant:											
Less than 5 years	8.9	11.8	19.6	11.6	15.3	19.2	25.9	14.0	17.2	20.5	
5 years to 14 years	5.9	9.1	14.1	8.9	10.8	14.9	18.4	9.4	11.3	16.6	
15 years to 29 years	5.8	7.9	11.6	8.9	11.5	13.0	15.4	8.1	10.3	13.3	
30 years or more	5.8	8.2	11.1	7.8	10.2	12.7	16.4	8.0	11.5	12.2	
Not specified	34.3	57.2	77.2	71.9	47.2	-	17.0	81.4	53.3	84.7	

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-6—Continued									
	A	B	C	D	E	F	G	H	I	J
Number of employees:										
Less than 20	14.4	22.5	45.1	24.8	27.2	42.6	44.2	21.8	34.3	45.6
20 to 99	5.0	7.2	11.1	8.0	9.8	13.1	13.2	7.7	9.3	13.6
100 to 499	3.6	4.9	8.1	5.6	7.0	8.0	11.6	5.1	6.8	8.6
500 to 999	3.7	3.9	3.8	3.9	4.9	7.5	25.9	4.8	4.1	8.9
1,000 or more	2.8	1.3	3.1	3.3	2.6	2.2	19.7	3.7	3.1	2.0
Not specified	31.7	48.9	72.5	53.2	45.6	90.4	-	43.8	64.8	48.1
Unionized plants:										
Yes.....	5.6	8.2	10.6	8.8	10.6	12.4	16.4	7.5	11.2	14.5
Contract in effect:										
Yes.....	5.6	8.3	10.8	8.5	10.7	12.5	16.4	7.6	11.3	14.6
No	37.7	56.5	52.3	76.6	74.0	7.1	-	37.7	9.7	13.3
No	3.5	5.1	8.2	5.3	6.8	8.5	10.4	5.4	6.8	9.2
Not specified	56.1	75.9	13.2	92.5	52.0	12.5	-	59.8	91.5	60.5
Percentage of products exported:										
None	9.2	12.5	19.2	15.9	18.9	25.8	26.6	13.0	17.2	19.2
Less than 10 percent.....	4.4	6.5	9.5	6.9	8.4	10.4	12.6	6.4	8.6	10.3
10 percent to 19 percent.....	6.7	9.0	14.1	10.0	13.1	13.3	17.9	8.3	11.5	11.6
20 percent to 49 percent.....	7.3	9.4	14.9	8.5	12.4	15.5	20.8	9.5	12.1	13.8
50 percent or more.....	11.7	14.7	35.7	13.9	18.5	26.8	36.0	21.0	21.4	28.7
Not specified	26.2	44.3	36.0	50.2	38.5	58.5	82.2	34.9	54.8	62.4
Value of goods and services:										
Less than \$750,000	24.1	46.5	72.1	41.9	43.2	69.5	58.8	34.5	71.9	55.0
\$750,000 to less than \$1 million	20.9	33.6	45.1	38.5	50.8	89.8	54.4	29.0	60.6	63.1
\$1 million to less than \$5 million.....	6.3	9.2	14.7	10.2	12.5	17.3	15.9	9.6	12.5	18.7
\$5 million to less than \$10 million.....	8.2	11.4	15.8	12.1	13.3	23.2	22.0	12.4	13.7	21.1
\$10 million to less than \$25 million.....	5.5	7.4	14.1	7.8	11.3	12.7	16.4	8.4	9.7	13.0
\$25 million to less than \$50 million.....	5.6	7.9	11.4	8.6	11.2	11.8	17.9	7.5	12.6	13.4
\$50 million to less than \$100 million.....	5.7	7.3	11.0	7.5	10.5	10.1	21.8	7.0	9.8	10.8
\$100 million or more	3.1	3.5	3.9	3.1	3.5	5.4	19.3	4.1	4.4	4.8
Not specified	27.2	32.8	55.0	33.9	38.5	48.0	17.0	41.2	41.4	39.3
Products made to military specifications:										
Yes.....	4.6	7.0	10.2	7.0	8.6	11.9	13.8	7.1	9.0	12.2
No	4.4	6.1	10.3	6.4	8.5	9.5	13.5	6.4	8.1	10.7
Don't know.....	13.4	17.5	21.2	20.1	19.0	26.8	27.2	17.0	25.7	28.3
Not specified	40.6	39.3	13.2	91.5	51.8	-	-	50.4	91.5	52.2
Prime contractor to defense agencies:										
Yes: Percent of products shipped	4.9	7.2	10.7	7.2	8.5	9.8	13.8	7.8	9.7	12.8
1 percent to 24 percent.....	5.7	8.1	13.4	8.1	10.1	12.8	16.6	8.7	11.1	14.9
25 percent to 74 percent.....	13.5	21.3	18.4	22.3	16.7	18.5	21.8	26.9	21.9	12.7
75 percent or more.....	13.9	7.0	18.2	22.9	10.8	17.2	25.2	12.7	38.3	11.0
Don't know.....	23.9	36.1	52.7	39.5	43.6	39.9	90.4	40.3	43.5	29.8
No	4.0	5.8	9.0	6.1	8.0	10.0	11.6	5.8	7.7	10.1
Don't know.....	13.7	19.1	20.4	17.6	22.4	20.6	46.5	15.7	31.0	21.8
Not specified	43.3	66.2	13.2	91.5	56.3	-	-	57.3	72.2	84.7
Subcontractor to defense agencies:										
Yes: Percent of products shipped	4.5	6.6	10.1	6.8	8.4	11.2	12.6	6.8	8.7	11.5
1 percent to 24 percent.....	5.5	8.4	12.5	8.3	9.7	13.8	15.3	8.5	10.4	13.5
25 percent to 74 percent.....	10.3	14.8	19.3	13.3	19.5	23.4	30.4	15.1	19.1	29.1
75 percent or more.....	19.3	23.6	24.4	25.7	33.9	40.1	41.9	27.4	30.3	46.5
Don't know.....	16.8	22.1	45.4	34.1	28.3	25.7	47.3	22.5	31.5	37.1
No	5.9	8.2	12.6	8.6	11.1	12.1	18.7	8.2	10.1	12.7
Don't know.....	6.7	9.1	14.0	9.0	11.6	14.4	18.3	9.7	13.8	18.2
Not specified	51.1	48.0	72.1	65.5	47.3	26.7	-	61.0	72.3	84.7
Foreign owned:										
Yes.....	7.9	12.0	15.7	9.6	14.4	15.5	24.4	10.6	14.2	16.2
No	3.3	4.9	7.5	5.1	6.5	8.2	9.9	5.2	6.6	8.7
Don't know.....	11.7	13.6	20.5	13.9	20.0	12.6	31.8	13.1	18.2	20.7
Not specified	33.1	31.3	76.6	68.1	43.3	47.6	-	46.3	39.8	66.1

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-7											
	A	B	C	D	E	F	G	H	I	J	K	L
Major Group:												
34, Fabricated Metal Products.....	4.7	6.1	8.4	10.3	9.1	39.8	18.1	13.1	14.8	19.0	24.1	16.9
35, Industrial Machinery and Equipment	4.1	5.2	7.2	9.1	8.8	34.4	19.5	11.8	15.0	18.9	20.4	12.0
36, Electronic and Other Electric Equipment	4.0	5.4	6.7	9.2	8.6	25.1	15.9	12.3	11.8	18.8	20.8	13.4
37, Transportation Equipment	4.5	6.0	8.1	11.0	8.3	34.4	22.4	11.0	14.4	16.8	20.7	12.6
38, Instruments and Related Products	4.8	6.1	8.6	14.4	9.6	41.1	19.5	12.2	12.7	22.1	24.7	15.8
Age of plant:												
Less than 5 years.....	6.7	8.2	10.2	15.6	13.6	78.4	25.0	16.6	19.2	27.2	30.4	21.0
5 years to 14 years.....	4.5	5.6	7.6	9.6	8.6	57.4	18.9	12.0	13.7	16.2	16.9	13.9
15 years to 29 years	4.6	5.8	7.7	9.8	8.1	26.9	15.7	10.2	12.7	18.0	21.7	12.6
30 years or more.....	4.7	5.7	7.6	10.6	8.8	22.3	19.7	10.2	12.0	20.6	24.7	11.7
Not specified	38.6	56.9	70.3	91.5	63.2	-	-	53.3	88.0	65.8	55.0	17.0
Number of employees:												
Less than 20	9.7	12.2	15.7	19.7	17.2	64.7	43.0	28.6	38.7	35.5	70.0	21.9
20 to 99	3.4	4.3	5.7	7.8	7.0	48.0	14.2	10.6	13.2	13.6	15.0	10.7
100 to 499	3.0	3.8	5.4	6.1	5.2	22.2	10.6	6.4	8.2	11.6	16.0	9.7
500 to 999	3.3	4.2	7.0	8.0	5.6	6.6	6.1	6.7	6.6	29.5	4.1	8.3
1,000 or more	2.2	1.3	1.5	9.0	6.9	4.8	3.9	8.8	3.3	17.4	3.3	2.1
Not specified	28.8	32.6	52.5	63.3	88.7	12.5	12.5	48.4	70.7	-	88.0	66.5
Unionized plants:												
Yes.....	5.0	6.1	8.5	9.5	8.6	22.3	18.3	10.2	12.5	19.7	25.2	13.4
Contract in effect:												
Yes.....	5.0	6.0	8.1	9.6	8.7	23.1	16.5	10.3	9.8	19.7	25.2	12.6
No	42.0	75.9	48.8	63.3	39.7	44.5	88.1	43.6	80.6	-	-	74.1
No	2.6	3.3	4.5	6.2	5.3	-	11.1	7.1	8.1	11.5	12.2	8.0
Not specified	38.6	61.4	84.7	67.0	-	-	-	51.9	-	93.1	-	20.1
Percentage of products exported:												
None	6.1	7.9	10.0	11.9	10.9	44.5	21.1	15.1	22.3	19.9	26.6	16.7
Less than 10 percent.....	3.3	4.2	5.5	7.3	6.4	31.1	13.8	8.3	9.6	14.6	15.6	10.1
10 percent to 19 percent.....	5.4	7.0	8.9	12.4	9.3	31.1	20.3	12.3	13.1	22.4	22.9	14.1
20 percent to 49 percent.....	6.6	7.6	10.2	13.1	12.1	44.0	28.0	18.2	18.1	22.6	27.2	15.7
50 percent or more.....	13.2	14.9	22.8	24.3	22.4	79.1	43.2	26.1	32.0	34.7	10.1	25.8
Not specified	21.8	31.8	35.2	43.6	46.7	-	12.5	42.9	72.0	95.2	9.8	50.7
Value of goods and services:												
Less than \$750,000	15.7	19.4	26.1	30.8	23.8	78.4	58.9	37.7	40.9	45.7	72.5	40.4
\$750,000 to less than \$1 million	15.0	17.2	26.4	29.2	29.1	-	62.8	53.2	47.4	56.1	96.9	65.0
\$1 million to less than \$5 million	4.2	5.2	6.8	9.5	8.4	47.4	18.4	13.8	19.4	16.4	19.4	12.5
\$5 million to less than \$10 million.....	6.2	7.9	9.9	12.6	11.6	42.8	23.0	16.1	18.9	22.9	23.7	16.9
\$10 million to less than \$25 million.....	4.4	5.5	7.5	9.9	7.9	28.9	13.6	10.5	11.5	20.8	22.6	13.6
\$25 million to less than \$50 million.....	5.5	6.1	7.7	11.0	8.7	34.9	18.5	10.1	13.8	19.7	22.2	14.3
\$50 million to less than \$100 million.....	4.9	6.1	9.1	11.0	7.6	14.9	9.8	9.7	11.9	16.1	19.6	10.7
\$100 million or more	2.9	3.1	5.7	7.4	5.6	12.8	4.2	9.1	4.0	19.4	4.7	4.8
Not specified	24.3	35.4	33.0	79.0	51.0	-	-	50.6	64.3	41.3	31.1	35.1
Products made to military specifications:												
Yes.....	3.8	4.7	6.3	8.5	7.1	22.8	14.4	9.4	10.1	14.5	17.2	10.9
No	3.3	4.2	5.6	7.5	6.4	42.9	12.8	8.0	9.8	14.5	15.4	9.0
Don't know.....	9.3	11.7	15.8	20.4	18.0	54.6	45.3	19.3	31.4	25.9	38.7	26.0
Not specified	34.3	59.2	51.4	70.5	74.5	-	-	52.2	73.1	-	74.1	-
Prime contractor to defense agencies:												
Yes: Percent of products shipped.....	4.3	5.1	6.9	10.5	7.9	29.5	17.8	8.9	9.8	13.6	18.6	11.8
1 percent to 24 percent.....	5.0	6.0	7.9	11.7	9.3	35.8	20.1	10.4	12.0	17.1	22.5	13.8
25 percent to 74 percent.....	11.3	10.7	12.8	21.8	23.8	49.7	40.0	24.2	19.8	31.9	33.7	35.8
75 percent or more.....	14.9	15.8	27.6	28.0	22.7	-	7.1	23.9	22.6	20.5	55.7	34.8
Don't know.....	20.3	27.0	34.3	16.8	29.3	55.6	76.0	40.7	76.5	76.0	84.7	49.9
No	2.9	3.8	5.0	6.3	5.6	32.6	11.5	7.8	10.2	12.6	13.9	8.8
Don't know.....	12.0	14.7	23.0	25.5	18.8	44.6	44.1	21.3	20.0	32.8	39.1	29.0
Not specified	44.7	75.2	66.0	91.5	-	-	-	62.4	-	-	-	-

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-7—Continued											
	A	B	C	D	E	F	G	H	I	J	K	L
Subcontractor to defense agencies:												
Yes: Percent of products shipped . . .	3.8	4.7	6.3	8.5	7.3	25.1	14.1	9.1	9.8	14.2	17.2	10.4
1 percent to 24 percent	4.8	5.7	8.1	10.3	9.2	29.8	17.1	11.3	12.8	19.1	21.0	12.5
25 percent to 74 percent	8.6	10.8	13.5	19.8	18.7	47.2	27.3	17.4	16.0	24.8	33.0	22.3
75 percent or more	15.9	19.5	22.7	30.5	20.2	-	62.2	39.7	40.5	28.0	71.3	42.9
Don't know	15.3	20.3	26.3	33.8	21.8	17.0	46.5	27.5	28.9	73.2	39.0	40.6
No	4.2	5.4	6.8	8.9	8.2	27.9	16.7	10.4	12.3	17.4	19.1	11.0
Don't know	5.0	6.2	8.2	11.4	8.5	37.9	19.2	11.0	16.2	17.1	18.6	16.2
Not specified	38.3	52.3	49.5	65.2	64.3	-	26.7	62.4	86.9	-	13.2	12.5
Foreign owned:												
Yes	7.3	9.0	12.7	14.3	12.3	34.1	23.5	15.9	18.0	31.7	22.1	20.6
No	2.5	3.1	4.2	5.8	5.0	26.2	10.5	6.6	7.7	10.8	12.4	7.5
Don't know	9.7	10.4	15.1	20.3	15.0	7.3	21.6	16.3	17.1	24.1	35.1	19.7
Not specified	26.8	39.0	58.6	50.4	35.8	-	22.8	33.5	41.0	-	85.3	17.0
	Relative standard errors for table 2-8											
	A	B	C	D	E	F	G	H	I	J		
Major Group:												
34, Fabricated Metal Products	4.8	4.1	5.8	10.2	11.6	19.4	6.6	7.2	23.1	3.4		
35, Industrial Machinery and Equipment	3.7	2.8	4.1	9.4	10.5	13.8	5.3	5.7	18.3	4.6		
36, Electronic and Other Electric Equipment	3.3	2.7	4.1	9.1	9.6	14.1	4.9	6.0	18.5	4.6		
37, Transportation Equipment	4.7	3.8	4.7	9.8	12.0	17.6	5.8	7.7	21.1	3.6		
38, Instruments and Related Products	4.0	3.1	4.6	11.6	11.8	15.6	6.3	7.5	17.9	5.0		
Age of plant:												
Less than 5 years	6.1	5.0	6.6	12.6	15.0	18.6	8.6	8.8	25.1	7.1		
5 years to 14 years	4.3	3.6	4.9	9.3	11.0	15.9	5.7	6.5	18.3	4.3		
15 years to 29 years	4.1	3.5	4.6	9.3	10.1	15.0	5.8	6.4	14.1	4.6		
30 years or more	4.6	3.7	4.8	10.4	9.3	16.6	5.8	6.8	14.1	5.2		
Not specified	44.3	38.0	28.7	91.7	25.6	14.4	45.1	58.9	84.5	15.9		
Number of employees:												
Less than 20	11.3	10.6	13.9	20.1	31.7	33.6	18.2	17.9	49.4	6.0		
20 to 99	3.4	2.7	3.9	7.2	9.1	13.1	4.9	5.1	14.6	2.8		
100 to 499	2.5	2.1	2.6	6.7	6.3	11.8	3.4	3.9	11.9	4.5		
500 to 999	2.9	2.3	2.6	8.0	6.4	3.3	2.8	4.4	12.7	10.4		
1,000 or more	2.1	1.5	1.6	8.6	11.3	6.2	2.2	2.6	6.7	13.9		
Not specified	29.6	29.5	28.0	60.7	59.9	51.2	47.5	53.8	45.1	22.8		
Unionized plants:												
Yes	4.6	3.8	4.8	11.5	9.6	20.2	5.7	7.2	16.5	5.8		
Contract in effect:												
Yes	4.7	3.9	4.9	11.6	9.7	20.5	5.9	7.3	16.7	5.9		
No	24.2	24.2	25.8	65.7	63.4	6.6	28.7	42.8	33.5	37.0		
Not specified	2.4	1.9	2.7	5.6	6.3	8.9	3.4	3.8	10.9	2.4		
Percentage of products exported:												
None	6.6	5.6	7.9	12.1	15.1	25.3	9.6	9.0	25.0	4.0		
Less than 10 percent	3.2	2.7	3.6	7.1	7.6	11.9	4.4	4.8	12.8	3.5		
10 percent to 19 percent	4.9	4.1	5.3	11.3	11.8	13.4	6.6	6.9	18.3	7.0		
20 percent to 49 percent	5.4	4.4	5.5	12.5	14.3	16.0	6.2	8.0	21.4	10.1		
50 percent or more	10.4	7.6	10.1	21.0	22.3	23.5	11.9	14.6	44.1	24.8		
Not specified	21.9	24.0	20.4	43.6	60.0	-	30.8	37.2	40.4	16.7		

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-8—Continued									
	A	B	C	D	E	F	G	H	I	J
Value of goods and services:										
Less than \$750,000	17.4	16.3	20.9	38.8	40.8	36.5	27.0	47.7	53.0	9.1
\$750,000 to less than \$1 million	16.7	15.9	21.5	31.5	42.7	50.8	25.3	29.0	44.8	10.2
\$1 million to less than \$5 million	4.6	3.7	5.3	9.0	12.1	17.1	6.6	6.5	18.9	3.3
\$5 million to less than \$10 million	5.4	4.7	6.4	12.1	12.2	20.0	7.5	8.2	22.1	6.1
\$10 million to less than \$25 million	3.9	3.4	4.2	8.6	9.7	11.5	5.4	6.0	18.6	6.5
\$25 million to less than \$50 million	4.6	3.7	4.7	12.6	11.5	24.2	5.4	6.6	20.0	10.7
\$50 million to less than \$100 million	4.5	3.8	4.5	12.6	10.2	15.6	5.2	6.1	12.4	9.6
\$100 million or more	2.7	2.2	2.3	8.9	9.1	5.3	2.9	4.5	6.6	12.0
Not specified	24.9	19.5	20.8	47.7	45.3	54.3	38.8	34.2	42.1	16.0
Products made to military specifications:										
Yes	3.4	2.9	3.9	7.9	8.7	13.9	4.7	5.3	15.8	4.2
No	3.2	2.5	3.4	7.1	7.7	11.6	4.2	4.8	12.6	3.1
Don't know	9.2	7.9	10.2	18.4	18.1	22.4	13.8	13.4	28.2	8.6
Not specified	41.7	39.3	28.9	73.4	60.1	-	48.9	44.8	-	22.4
Prime contractor to defense agencies:										
Yes: Percent of products shipped	3.6	3.2	4.0	8.8	9.4	12.5	5.1	6.0	13.9	5.7
1 percent to 24 percent	4.2	3.7	4.6	10.1	10.6	13.2	5.9	6.7	15.9	6.5
25 percent to 74 percent	11.0	9.4	12.8	20.6	29.8	35.5	12.7	15.0	24.0	16.2
75 percent or more	13.0	11.6	11.2	24.1	24.6	67.0	11.8	25.4	22.1	21.4
Don't know	21.0	17.0	19.8	35.6	47.6	16.8	26.4	37.3	-	35.1
No	2.8	2.3	3.2	6.4	7.0	11.5	3.8	4.2	12.6	2.5
Don't know	10.1	8.7	10.9	17.6	21.0	20.9	12.3	18.5	31.1	12.1
Not specified	44.7	50.3	38.7	90.0	68.9	68.9	64.4	61.3	-	25.2
Subcontractor to defense agencies:										
Yes: Percent of products shipped	3.3	2.8	3.9	7.5	8.9	13.5	4.4	5.2	15.0	4.6
1 percent to 24 percent	4.2	3.5	4.8	9.5	10.6	14.2	5.4	6.4	18.9	6.0
25 percent to 74 percent	7.8	7.0	9.4	16.7	23.1	35.3	10.6	11.5	27.9	10.7
75 percent or more	15.4	13.6	16.6	25.9	33.9	72.1	18.4	21.4	36.3	19.6
Don't know	15.4	12.8	16.0	31.2	23.9	28.2	21.3	24.6	44.6	16.1
No	4.1	3.4	4.5	8.8	9.4	13.2	5.8	6.3	15.7	3.6
Don't know	4.8	3.9	5.0	11.0	10.9	18.2	6.4	7.0	18.8	4.7
Not specified	29.2	28.0	38.7	13.2	-	-	42.4	44.7	96.2	21.6
Foreign owned:										
Yes	6.4	5.2	7.5	15.9	11.8	18.3	8.3	10.2	29.6	9.5
No	2.3	1.8	2.6	5.3	6.1	9.2	3.2	3.6	10.3	2.2
Don't know	9.5	8.5	9.6	15.0	16.8	19.0	13.2	11.5	28.8	13.9
Not specified	25.4	21.3	22.5	50.3	56.4	51.7	31.1	28.4	20.1	22.6
Relative standard errors for table 2-9										
	A	B	C	D	E	F	G	H		
Major Group:										
34, Fabricated Metal Products	0.7	6.2	8.6	9.4	9.1	6.2	4.8	26.4		
35, Industrial Machinery and Equipment	0.6	7.1	8.3	8.2	6.8	4.2	6.0	26.9		
36, Electronic and Other Electric Equipment	0.8	7.0	7.9	7.9	6.6	4.1	6.0	24.8		
37, Transportation Equipment	0.9	6.6	10.3	10.0	7.3	5.6	5.0	24.0		
38, Instruments and Related Products	0.7	7.6	9.3	8.4	7.6	5.4	6.6	43.9		
Age of plant:										
Less than 5 years	3.6	9.6	12.1	12.0	10.4	6.4	9.2	35.8		
5 years to 14 years	2.2	6.6	8.1	8.1	7.4	5.1	5.5	24.5		
15 years to 29 years	2.3	6.7	8.3	8.4	6.6	4.9	5.7	30.8		
30 years or more	2.6	6.9	8.8	8.8	7.3	5.1	6.7	22.6		
Not specified	14.2	45.3	66.3	63.1	39.3	33.5	16.6	30.7		

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-9—Continued							
	A	B	C	D	E	F	G	H
Number of employees:								
Less than 20	4.7	11.4	18.8	19.1	23.9	16.6	6.9	33.0
20 to 99	1.1	4.5	6.4	6.8	5.9	4.1	3.9	19.6
100 to 499	1.4	5.2	5.6	5.2	4.4	2.9	6.1	22.1
500 to 999	2.0	9.3	4.7	6.1	3.8	3.0	13.2	7.1
1,000 or more	1.5	17.4	3.2	1.9	1.5	2.2	17.8	6.0
Not specified	16.4	58.7	76.9	54.7	33.0	39.0	23.5	92.5
Unionized plants:								
Yes.....	2.8	7.7	9.7	9.5	7.3	4.5	7.6	30.5
Contract in effect:								
Yes.....	2.8	7.9	9.8	9.7	7.2	4.5	7.7	23.4
No	22.0	28.7	52.3	32.7	56.3	31.9	52.0	97.8
No	0.7	3.9	5.0	5.0	4.3	2.9	3.2	16.3
Not specified	22.7	96.2	50.4	81.1	39.2	40.2	27.7	-
Percentage of products exported:								
None	2.4	7.3	11.8	11.9	12.2	8.5	4.6	24.9
Less than 10 percent.....	1.6	4.9	6.1	6.3	5.4	3.9	4.6	21.8
10 percent to 19 percent.....	3.1	8.5	9.7	9.3	7.5	5.7	9.9	41.0
20 percent to 49 percent.....	3.6	12.7	12.4	10.2	8.2	5.6	14.1	39.3
50 percent or more.....	7.1	26.1	25.4	20.1	20.0	9.4	32.0	17.8
Not specified	12.5	31.6	31.0	45.6	38.5	27.6	20.3	59.6
Value of goods and services:								
Less than \$750,000	7.4	16.5	31.1	36.4	38.8	26.5	10.2	47.1
\$750,000 to less than \$1 million	7.8	16.3	30.9	32.9	31.7	24.1	12.1	50.2
\$1 million to less than \$5 million	1.7	5.4	7.9	8.3	8.1	5.7	4.4	22.3
\$5 million to less than \$10 million.....	3.1	8.5	10.4	11.0	8.7	6.5	8.2	34.4
\$10 million to less than \$25 million.....	2.5	7.0	8.5	6.7	6.3	4.7	9.0	35.0
\$25 million to less than \$50 million.....	3.1	9.2	11.1	8.8	6.6	4.9	14.5	36.9
\$50 million to less than \$100 million.....	3.0	10.5	11.4	9.0	6.6	4.6	11.6	34.3
\$100 million or more.....	1.9	14.7	7.6	3.7	2.9	2.6	13.2	5.5
Not specified	11.9	27.5	47.8	35.8	30.2	25.5	18.3	90.4
Products made to military specifications:								
Yes.....	1.8	6.0	6.8	7.4	5.7	4.1	5.7	22.2
No	1.4	4.6	6.2	6.0	5.3	3.7	3.9	19.4
Don't know.....	5.2	13.8	20.5	15.4	16.2	10.3	10.1	26.9
Not specified	17.9	62.7	52.4	36.0	49.9	59.8	23.5	-
Prime contractor to defense agencies:								
Yes: Percent of products shipped	2.3	7.2	7.9	7.5	6.2	4.3	7.5	27.2
1 percent to 24 percent.....	2.7	8.1	9.0	8.5	7.3	5.0	8.6	29.7
25 percent to 74 percent.....	7.2	22.0	22.1	19.8	15.7	10.8	23.2	51.8
75 percent or more.....	9.3	28.2	26.8	23.4	11.8	17.5	25.4	18.0
Don't know.....	16.9	32.7	45.8	41.0	35.6	20.6	37.9	-
No	1.0	4.1	5.5	5.7	4.9	3.3	3.4	17.4
Don't know.....	6.7	17.5	29.4	18.0	15.4	12.5	13.5	41.7
Not specified	21.1	69.4	66.8	50.3	51.4	67.5	27.1	90.4
Subcontractor to defense agencies:								
Yes: Percent of products shipped	1.8	6.4	6.6	7.1	5.6	3.9	6.2	23.3
1 percent to 24 percent.....	2.5	7.9	8.2	8.5	7.1	4.8	8.0	29.1
25 percent to 74 percent.....	5.1	14.7	15.2	14.5	12.1	9.6	14.4	39.4
75 percent or more.....	9.4	25.8	28.8	31.3	23.6	17.0	21.9	57.9
Don't know.....	9.2	22.0	22.8	31.5	17.5	16.1	20.0	83.5
No	2.0	5.4	8.0	7.6	7.1	4.9	4.5	24.5
Don't know.....	2.6	7.1	9.5	8.8	7.3	5.4	5.9	27.0
Not specified	17.4	56.1	44.6	50.3	45.3	46.0	23.6	90.4

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-9—Continued							
	A	B	C	D	E	F	G	H
Foreign owned:								
Yes.....	4.2	13.5	13.6	13.0	9.2	7.5	11.5	26.1
No.....	0.6	3.6	4.8	4.7	4.1	2.8	3.0	15.6
Don't know.....	6.1	14.8	16.3	22.2	12.8	11.0	15.9	9.4
Not specified.....	14.6	32.4	36.9	34.6	43.4	27.8	28.9	64.9
	Relative standard errors for table 2-10							
	A	B	C	D	E	F	G	
Major Group:								
34, Fabricated Metal Products.....	0.7	15.8	8.5	5.6	4.8	4.3		29.2
35, Industrial Machinery and Equipment.....	0.6	17.7	6.4	4.2	4.3	5.5		32.8
36, Electronic and Other Electric Equipment.....	0.8	15.4	5.5	4.3	4.6	5.4		27.6
37, Transportation Equipment.....	0.9	17.5	6.7	5.7	5.2	4.4		31.3
38, Instruments and Related Products.....	0.7	23.1	6.9	4.9	5.1	6.0		40.1
Age of plant:								
Less than 5 years.....	3.6	20.7	8.6	7.0	6.9	8.5		46.9
5 years to 14 years.....	2.2	19.1	6.9	4.9	4.8	5.1		26.2
15 years to 29 years.....	2.3	13.3	6.7	4.8	4.9	5.2		33.7
30 years or more.....	2.6	18.5	6.7	4.8	5.6	6.0		26.8
Not specified.....	14.2	-	37.7	46.4	38.5	16.2		-
Number of employees:								
Less than 20.....	4.7	45.0	20.0	13.9	9.8	6.8		35.9
20 to 99.....	1.1	15.6	5.8	4.1	3.3	3.5		22.4
100 to 499.....	1.4	10.2	4.1	2.9	3.6	4.9		24.3
500 to 999.....	2.0	10.1	4.1	2.8	5.3	8.0		9.0
1,000 or more.....	1.5	3.0	2.7	1.7	6.2	14.4		6.5
Not specified.....	16.4	12.5	38.1	36.1	35.6	22.9		-
Unionized plants:								
Yes.....	2.8	15.8	5.1	5.2	6.1	6.6		34.5
Contract in effect:								
Yes.....	2.8	15.9	5.2	5.3	6.1	6.6		34.5
No.....	22.0	74.4	32.7	31.6	41.4	48.8		-
No.....	0.7	10.5	4.0	2.8	2.7	2.9		17.9
Not specified.....	22.7	12.5	43.4	71.0	53.4	27.7		26.7
Percentage of products exported:								
None.....	2.4	25.6	11.7	7.9	5.9	4.4		32.5
Less than 10 percent.....	1.6	11.7	5.3	3.7	3.6	4.1		23.3
10 percent to 19 percent.....	3.1	21.2	6.8	5.4	6.6	8.4		29.9
20 percent to 49 percent.....	3.6	25.8	7.0	5.8	8.0	11.2		61.6
50 percent or more.....	7.1	30.8	14.1	10.2	16.5	28.0		12.3
Not specified.....	12.5	64.1	40.2	25.7	24.1	20.4		95.2
Value of goods and services:								
Less than \$750,000.....	7.4	56.1	31.0	23.7	16.7	9.7		41.4
\$750,000 to less than \$1 million.....	7.8	53.9	32.6	24.5	13.5	11.8		54.3
\$1 million to less than \$5 million.....	1.7	20.5	7.6	5.4	4.1	4.1		28.7
\$5 million to less than \$10 million.....	3.1	25.3	8.6	6.3	6.1	7.3		37.1
\$10 million to less than \$25 million.....	2.5	15.5	6.1	4.2	5.8	6.8		31.1
\$25 million to less than \$50 million.....	3.1	13.5	6.4	5.6	6.2	11.2		32.4
\$50 million to less than \$100 million.....	3.0	16.8	5.5	4.8	7.5	9.7		42.1
\$100 million or more.....	1.9	7.2	3.0	2.4	7.1	12.6		12.9
Not specified.....	11.9	67.2	24.0	36.5	25.0	16.2		54.0
Products made to military specifications:								
Yes.....	1.8	14.2	5.5	4.0	4.2	5.1		22.0
No.....	1.4	11.6	4.9	3.5	3.5	3.6		25.2
Don't know.....	5.2	41.3	14.8	11.0	9.8	9.6		53.0
Not specified.....	17.9	-	47.4	73.1	41.3	22.8		-

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-10—Continued							
	A	B	C	D	E	F	G	
Prime contractor to defense agencies:								
Yes: Percent of products shipped	2.3	13.3	5.8	4.3	5.1	6.7	29.2	
1 percent to 24 percent.	2.7	13.4	6.8	4.9	5.8	7.6	32.3	
25 percent to 74 percent.	7.2	44.8	13.7	11.4	14.5	20.6	56.3	
75 percent or more.	9.3	19.0	12.9	13.1	21.2	23.6	68.3	
Don't know.	16.9	66.8	33.5	24.2	31.1	29.7	97.8	
No	1.0	11.8	4.6	3.2	3.0	3.0	19.5	
Don't know.	6.7	29.3	16.4	13.8	11.3	13.7	65.7	
Not specified	21.1	-	50.3	78.7	56.3	25.8	90.4	
Subcontractor to defense agencies:								
Yes: Percent of products shipped	1.8	13.5	5.1	3.9	4.3	5.6	21.2	
1 percent to 24 percent.	2.5	17.8	6.3	4.7	5.5	7.2	31.5	
25 percent to 74 percent.	5.1	27.8	11.6	9.3	10.0	12.9	34.6	
75 percent or more.	9.4	35.3	21.5	17.1	17.6	21.7	61.7	
Don't know.	9.2	35.6	17.3	20.4	15.6	18.7	67.5	
No	2.0	15.1	6.6	4.6	4.4	4.2	29.9	
Don't know.	2.6	18.4	7.6	5.4	5.2	5.5	30.7	
Not specified	17.4	12.5	47.1	47.2	48.5	21.5	90.4	
Foreign owned:								
Yes.	4.2	27.2	10.0	7.4	8.9	9.8	33.1	
No	0.6	9.3	3.8	2.7	2.6	2.7	17.4	
Don't know.	6.1	55.4	10.5	9.3	13.8	14.3	62.3	
Not specified	14.6	70.9	40.0	27.0	34.3	23.8	67.3	
	Relative standard errors for table 2-11							
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	3.1	8.7	18.1	13.9	50.3	4.0	26.9
35, Industrial Machinery and Equipment.	0.6	2.5	5.7	12.2	28.6	9.0	4.9	27.6
36, Electronic and Other Electric Equipment.	0.8	2.9	5.1	9.9	21.8	24.0	5.0	26.1
37, Transportation Equipment	0.9	3.7	5.9	9.3	4.5	4.5	4.1	28.6
38, Instruments and Related Products	0.7	3.3	5.8	7.9	21.2	7.5	5.6	30.5
Age of plant:								
Less than 5 years.	3.6	5.1	8.1	18.7	36.2	24.6	7.8	38.9
5 years to 14 years.	2.2	3.5	6.2	9.2	32.1	37.9	4.7	22.4
15 years to 29 years	2.3	3.5	5.9	11.8	23.9	9.1	5.0	27.8
30 years or more.	2.6	4.0	5.9	4.5	7.0	4.2	5.6	20.1
Not specified	14.2	41.8	41.0	13.2	17.0	17.0	15.9	-
Number of employees:								
Less than 20	4.7	8.0	26.4	91.5	-	-	6.5	29.5
20 to 99	1.1	2.2	6.6	30.0	71.1	-	3.2	20.2
100 to 499	1.4	2.2	3.6	11.8	43.0	39.9	4.7	21.8
500 to 999	2.0	3.6	2.9	5.3	22.6	36.0	7.4	6.5
1,000 or more	1.5	5.6	2.1	3.0	4.8	2.8	11.2	6.4
Not specified	16.4	31.7	32.2	19.5	-	-	22.3	-
Unionized plants:								
Yes.	2.8	4.2	5.6	4.4	3.6	6.1	6.3	31.2
Contract in effect:								
Yes.	2.8	4.3	5.3	4.6	3.8	6.1	6.4	31.2
No	22.0	28.6	58.7	5.9	11.2	-	47.5	-
No	0.7	1.8	3.6	7.1	16.1	15.1	2.7	14.6
Not specified	22.7	50.2	45.1	13.2	-	-	27.2	-

See footnote at end of table.

Table D-2. Estimates of Relative Standard Errors for Tables in Design and Engineering—Continued

Plant characteristic	Relative standard errors for table 2-11—Continued							
	A	B	C	D	E	F	G	H
Percentage of products exported:								
None	2.4	4.7	11.0	19.3	45.0	19.3	4.2	28.0
Less than 10 percent.....	1.6	2.5	4.8	10.3	19.7	5.2	3.8	17.1
10 percent to 19 percent.....	3.1	4.3	6.7	8.4	24.2	30.6	8.0	41.4
20 percent to 49 percent.....	3.6	5.6	5.9	8.1	16.9	9.5	10.8	43.1
50 percent or more.....	7.1	10.8	12.9	16.7	20.3	6.1	22.0	10.1
Not specified	12.5	19.4	33.5	53.0	20.1	12.1	19.8	95.2
Value of goods and services:								
Less than \$750,000	7.4	13.6	33.8	81.0	-	-	9.7	36.0
\$750,000 to less than \$1 million	7.8	12.3	32.5	-	-	-	11.2	51.3
\$1 million to less than \$5 million	1.7	3.0	9.1	52.6	-	-	3.8	24.2
\$5 million to less than \$10 million.....	3.1	4.2	9.6	48.3	71.1	-	7.0	33.2
\$10 million to less than \$25 million.....	2.5	3.4	5.6	18.4	-	-	6.8	27.1
\$25 million to less than \$50 million.....	3.1	4.5	5.5	13.1	58.6	16.0	10.4	37.0
\$50 million to less than \$100 million.....	3.0	5.5	4.6	9.2	23.9	22.8	9.3	45.2
\$100 million or more.....	1.9	5.1	3.0	2.8	5.0	10.8	10.8	6.4
Not specified	11.9	20.6	29.8	7.9	18.8	20.1	16.1	54.0
Products made to military specifications:								
Yes.....	1.8	2.9	4.9	6.1	14.4	3.2	4.7	19.8
No	1.4	2.5	4.3	9.0	20.4	23.5	3.4	19.5
Don't know	5.2	7.8	14.3	10.2	8.4	24.4	8.9	40.9
Not specified	17.9	38.6	44.8	19.5	-	-	22.2	-
Prime contractor to defense agencies:								
Yes: Percent of products shipped	2.3	3.4	4.8	5.1	14.9	4.0	6.3	30.9
1 percent to 24 percent.....	2.7	3.9	5.7	8.2	20.4	7.2	7.1	36.0
25 percent to 74 percent.....	7.2	10.7	12.6	9.4	7.8	8.0	19.5	50.8
75 percent or more.....	9.3	17.9	11.5	5.9	5.0	6.9	22.4	68.3
Don't know	16.9	20.6	21.4	6.7	-	10.3	34.0	-
No	1.0	2.1	4.2	8.6	19.1	20.0	2.8	15.2
Don't know	6.7	10.3	14.3	12.4	10.1	10.4	12.1	47.2
Not specified	21.1	56.0	53.6	13.2	-	-	25.8	90.4
Subcontractor to defense agencies:								
Yes: Percent of products shipped	1.8	2.9	4.7	6.0	12.6	3.9	5.1	19.7
1 percent to 24 percent.....	2.5	3.6	5.9	8.0	12.1	5.3	6.7	26.4
25 percent to 74 percent.....	5.1	7.6	9.8	11.7	34.0	6.5	11.6	34.9
75 percent or more.....	9.4	14.1	18.8	11.5	30.3	10.0	20.5	47.9
Don't know	9.2	13.0	18.0	15.3	8.8	14.8	7.4	81.4
No	2.0	3.3	5.8	12.2	31.3	26.5	3.9	27.2
Don't know	2.6	4.0	6.6	11.1	6.2	15.2	5.1	23.7
Not specified	17.4	35.8	49.8	58.7	-	13.2	22.1	90.4
Foreign owned:								
Yes.....	4.2	6.5	8.3	11.1	20.9	55.2	9.5	42.3
No	0.6	1.6	3.5	6.3	8.3	3.8	2.5	14.3
Don't know	6.1	9.8	8.7	13.3	64.6	12.1	14.6	17.9
Not specified	14.6	25.4	30.6	27.8	93.1	13.2	24.0	67.3

- Represents zero.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining

Plant characteristic	Relative standard errors for table 3-1							
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	4.8	7.1	8.2	10.1	11.1	5.0	38.5
35, Industrial Machinery and Equipment	0.6	4.9	6.3	6.5	7.2	7.5	6.1	33.6
36, Electronic and Other Electric Equipment	0.8	4.5	6.0	7.0	8.6	8.4	5.1	40.6
37, Transportation Equipment	0.9	5.4	7.5	8.0	8.3	8.7	5.0	41.1
38, Instruments and Related Products	0.7	5.3	7.6	8.5	8.3	10.3	5.7	44.8
Age of plant:								
Less than 5 years	3.6	7.1	10.9	11.3	13.2	11.7	7.0	56.1
5 years to 14 years	2.2	5.0	6.7	7.4	8.5	8.7	5.2	40.5
15 years to 29 years	2.3	4.9	6.3	7.2	7.8	8.7	5.9	33.9
30 years or more	2.6	5.2	6.2	7.4	8.7	10.9	6.8	27.0
Not specified	14.2	41.4	42.7	96.9	64.4	12.2	15.9	-
Number of employees:								
Less than 20	4.7	9.0	18.5	16.1	20.0	24.0	7.6	35.7
20 to 99	1.1	3.5	5.5	6.1	7.1	6.9	3.6	29.1
100 to 499	1.4	3.4	4.2	4.1	5.2	6.6	5.3	27.8
500 to 999	2.0	5.6	3.6	3.5	4.3	6.3	12.9	10.8
1,000 or more	1.5	9.1	1.8	2.4	2.3	3.7	21.1	4.9
Not specified	16.4	35.2	48.8	60.6	64.4	59.9	22.5	-
Unionized plants:								
Yes	2.8	5.5	6.3	7.8	9.0	11.0	7.7	40.3
Contract in effect:								
Yes	2.8	5.6	6.4	7.9	8.8	11.2	7.8	40.3
No	22.0	35.5	40.0	30.0	57.1	48.9	53.3	-
Not specified	0.7	2.9	4.0	4.5	5.0	5.0	3.0	19.8
Percentage of products exported:								
None	2.4	6.4	10.0	10.0	10.4	10.4	5.1	40.9
Less than 10 percent	1.6	3.7	4.7	5.9	6.7	7.4	4.2	23.7
10 percent to 19 percent	3.1	6.0	7.5	7.8	9.0	10.5	9.1	40.9
20 percent to 49 percent	3.6	7.6	9.7	7.9	9.9	10.0	10.8	44.1
50 percent or more	7.1	15.6	19.4	17.8	19.6	19.6	14.4	-
Not specified	12.5	25.0	32.6	27.7	45.4	46.6	20.3	87.1
Value of goods and services:								
Less than \$750,000	7.4	14.7	27.7	26.9	40.7	38.3	10.3	64.1
\$750,000 to less than \$1 million	7.8	14.7	26.9	25.3	32.9	36.9	12.1	66.3
\$1 million to less than \$5 million	1.7	4.4	7.3	7.7	8.4	8.4	4.3	27.3
\$5 million to less than \$10 million	3.1	6.1	8.1	9.3	12.1	11.9	7.6	71.4
\$10 million to less than \$25 million	2.5	4.7	6.0	7.7	8.1	9.4	7.4	35.1
\$25 million to less than \$50 million	3.1	6.3	7.6	7.1	8.2	9.4	12.7	37.8
\$50 million to less than \$100 million	3.0	8.0	6.2	7.1	7.0	7.7	10.4	61.1
\$100 million or more	1.9	8.9	3.1	3.0	3.6	4.7	12.5	4.8
Not specified	11.9	23.1	49.1	52.4	34.5	35.7	16.0	-
Products made to military specifications:								
Yes	1.8	4.5	5.3	5.9	6.7	6.8	5.6	28.4
No	1.4	3.4	4.9	5.7	6.6	7.1	3.6	24.0
Don't know	5.2	10.0	15.0	15.3	15.6	19.6	10.3	52.3
Not specified	17.9	56.7	41.8	70.2	49.7	45.0	22.5	-
Prime contractor to defense agencies:								
Yes: Percent of products shipped ...	2.3	4.8	5.8	6.6	7.5	9.0	6.6	29.8
1 percent to 24 percent	2.7	5.5	6.7	7.3	9.0	10.2	7.4	39.6
25 percent to 74 percent	7.2	13.4	14.7	19.1	18.8	22.0	19.1	58.2
75 percent or more	9.3	17.3	19.1	12.1	25.1	34.7	22.5	32.6
Don't know	16.9	25.4	28.2	34.5	32.3	14.4	37.3	-
No	1.0	3.1	4.4	5.0	5.7	5.8	3.3	22.6
Don't know	6.7	13.6	18.7	20.4	17.9	23.3	12.4	38.5
Not specified	21.1	72.2	47.3	-	55.9	-	24.8	-

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-1—Continued							
	A	B	C	D	E	F	G	H
Subcontractor to defense agencies:								
Yes: Percent of products shipped . . .	1.8	4.5	5.3	5.9	6.5	6.9	5.7	26.2
1 percent to 24 percent	2.5	5.5	6.5	7.4	8.4	9.1	7.0	34.3
25 percent to 74 percent	5.1	11.4	11.7	12.9	13.9	14.9	13.3	43.3
75 percent or more	9.4	21.9	21.7	22.3	21.8	22.0	27.9	-
Don't know	9.2	15.0	26.6	23.8	30.6	29.0	21.5	51.2
No	2.0	4.3	6.3	7.3	8.1	8.6	4.3	28.4
Don't know	2.6	5.1	7.1	8.2	9.3	10.5	5.8	37.4
Not specified	17.4	54.9	43.5	61.0	45.3	97.5	21.6	-
Foreign owned:								
Yes	4.2	8.1	8.7	10.4	10.9	15.7	11.3	59.4
No	0.6	2.6	3.7	4.3	4.8	5.1	2.9	19.0
Don't know	6.1	13.0	17.2	10.9	13.5	17.6	17.3	12.5
Not specified	14.6	39.6	48.8	50.3	37.9	49.4	20.0	63.0
	Relative standard errors for table 3-2							
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	3.8	5.4	10.5	18.4	19.3	4.8	29.9
35, Industrial Machinery and Equipment	0.6	3.7	4.3	8.4	11.9	8.7	5.5	45.2
36, Electronic and Other Electric Equipment	0.8	3.5	5.0	8.6	14.7	7.9	5.0	43.8
37, Transportation Equipment	0.9	4.9	5.5	7.6	11.5	9.2	4.6	38.6
38, Instruments and Related Products	0.7	4.2	5.4	9.3	12.5	10.7	5.5	43.4
Age of plant:								
Less than 5 years	3.6	6.0	8.0	14.2	35.3	27.2	6.9	52.7
5 years to 14 years	2.2	4.0	5.4	10.3	19.4	12.5	4.9	36.4
15 years to 29 years	2.3	4.3	4.9	8.1	10.1	7.6	5.6	48.5
30 years or more	2.6	4.8	5.5	6.5	6.8	4.4	6.5	29.0
Not specified	14.2	40.2	54.4	39.9	-	12.0	16.0	63.7
Number of employees:								
Less than 20	4.7	7.5	17.2	74.4	-	-	7.1	44.5
20 to 99	1.1	2.8	4.0	11.7	56.4	72.1	3.4	25.0
100 to 499	1.4	3.1	2.8	5.4	13.3	14.7	5.2	31.2
500 to 999	2.0	5.7	3.4	3.6	4.7	8.6	12.9	6.6
1,000 or more	1.5	2.7	2.5	2.8	1.8	3.4	19.3	7.7
Not specified	16.4	45.3	33.9	47.7	12.5	-	21.1	76.0
Unionized plants:								
Yes	2.8	5.2	5.8	7.2	7.9	4.8	7.4	34.6
Contract in effect:								
Yes	2.8	5.3	5.9	7.3	7.9	4.9	7.5	34.6
No	22.0	31.1	25.2	35.1	63.4	20.0	50.0	-
No	0.7	2.3	2.9	5.6	10.2	7.2	2.9	23.6
Not specified	22.7	50.8	45.4	60.8	11.9	26.7	27.6	76.0
Percentage of products exported:								
None	2.4	5.0	6.9	16.2	31.9	18.1	5.0	35.8
Less than 10 percent	1.6	3.2	3.9	6.5	7.6	7.2	4.0	26.0
10 percent to 19 percent	3.1	5.2	5.9	9.2	14.7	10.0	8.4	50.3
20 percent to 49 percent	3.6	6.1	6.9	9.0	19.1	9.0	10.6	62.3
50 percent or more	7.1	12.3	15.0	22.3	34.6	17.1	14.9	71.2
Not specified	12.5	21.8	30.9	29.8	58.6	34.5	19.8	79.8
Value of goods and services:								
Less than \$750,000	7.4	12.2	34.2	53.8	12.5	-	10.2	67.1
\$750,000 to less than \$1 million	7.8	11.7	23.7	-	-	12.6	12.4	64.1
\$1 million to less than \$5 million	1.7	3.5	5.2	18.5	14.7	-	4.1	29.5
\$5 million to less than \$10 million	3.1	5.1	6.6	13.9	52.7	48.8	7.1	51.8
\$10 million to less than \$25 million	2.5	4.4	4.6	8.5	23.1	31.0	7.1	39.2
\$25 million to less than \$50 million	3.1	5.7	5.0	8.3	16.0	21.2	12.5	36.5
\$50 million to less than \$100 million	3.0	8.0	5.6	5.4	8.7	12.9	10.6	10.8
\$100 million or more	1.9	9.1	4.3	3.3	4.7	3.5	11.6	7.0
Not specified	11.9	26.9	25.9	23.5	-	24.9	15.3	76.0

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-2—Continued								
	A	B	C	D	E	F	G	H	
Products made to military specifications:									
Yes.....	1.8	3.7	4.1	6.6	9.3	6.4	5.3	42.3	
No.....	1.4	2.9	3.9	6.5	10.1	7.2	3.5	22.1	
Don't know	5.2	8.5	11.6	20.2	16.0	10.7	10.0	65.6	
Not specified	17.9	45.3	49.1	28.6	-	-	22.7	76.0	
Prime contractor to defense agencies:									
Yes: Percent of products shipped ...	2.3	4.1	5.0	6.1	11.1	6.8	6.1	29.6	
1 percent to 24 percent.....	2.7	4.7	5.7	7.2	15.3	8.7	6.9	41.4	
25 percent to 74 percent.....	7.2	11.5	14.0	15.2	16.4	19.1	19.0	53.6	
75 percent or more.....	9.3	17.2	20.9	14.7	6.1	4.1	22.0	36.4	
Don't know	16.9	24.0	24.6	27.5	7.3	51.1	34.6	-	
No.....	1.0	2.5	3.3	6.1	9.2	6.4	3.2	21.8	
Don't know	6.7	12.4	13.8	24.2	17.4	15.1	12.2	77.5	
Not specified	21.1	61.2	53.9	60.4	-	-	25.9	76.0	
Subcontractor to defense agencies:									
Yes: Percent of products shipped ...	1.8	3.7	4.1	6.6	10.8	6.7	5.4	35.5	
1 percent to 24 percent.....	2.5	4.6	5.2	8.6	13.7	8.4	6.7	34.2	
25 percent to 74 percent.....	5.1	8.8	9.5	13.1	15.1	15.5	12.1	46.6	
75 percent or more.....	9.4	17.1	16.5	18.6	46.1	21.5	26.5	-	
Don't know	9.2	14.3	17.7	26.5	23.6	21.2	23.0	97.5	
No.....	2.0	3.7	5.1	8.6	10.8	7.4	4.2	27.2	
Don't know	2.6	4.6	5.6	9.3	13.3	10.7	5.5	40.5	
Not specified	17.4	44.7	39.8	42.6	12.5	13.2	22.3	76.0	
Foreign owned:									
Yes.....	4.2	7.8	7.5	11.9	14.6	13.6	10.9	74.1	
No.....	0.6	2.1	2.8	5.2	8.4	4.8	2.7	20.4	
Don't know	6.1	12.8	9.4	14.7	18.0	8.1	16.7	9.9	
Not specified	14.6	30.4	32.6	35.4	7.4	6.3	19.8	76.0	
	Relative standard errors for table 3-3								
	A	B	C	D	E	F	G	H	I
Major Group:									
34, Fabricated Metal Products	0.7	4.2	6.3	9.1	19.2	6.7	58.9	4.2	29.6
35, Industrial Machinery and Equipment.....	0.6	3.3	5.5	7.2	14.3	56.9	-	4.7	28.1
36, Electronic and Other Electric Equipment.....	0.8	4.0	5.2	6.1	17.8	38.1	89.3	4.1	28.3
37, Transportation Equipment	0.9	5.8	6.1	7.0	11.0	48.7	5.7	4.2	33.6
38, Instruments and Related Products	0.7	5.1	5.6	8.1	15.1	48.7	53.7	4.6	31.1
Age of plant:									
Less than 5 years	3.6	6.0	9.1	14.1	31.0	59.3	10.9	6.3	53.4
5 years to 14 years.....	2.2	4.3	5.9	8.2	21.4	79.6	53.4	4.4	27.3
15 years to 29 years.....	2.3	4.6	5.3	6.4	13.4	38.1	9.2	4.8	30.7
30 years or more.....	2.6	5.7	5.5	6.5	8.3	22.0	53.7	5.5	20.3
Not specified	14.2	39.1	37.8	85.2	11.2	-	-	15.7	88.3
Number of employees:									
Less than 20	4.7	8.1	19.9	38.0	97.5	-	-	6.7	36.5
20 to 99.....	1.1	2.8	5.0	8.7	27.6	56.3	82.6	3.0	21.8
100 to 499	1.4	3.7	3.2	4.1	10.4	33.7	53.4	4.0	21.2
500 to 999	2.0	5.2	3.7	3.4	5.9	6.3	7.8	8.9	20.0
1,000 or more.....	1.5	3.8	2.9	2.8	1.3	17.4	5.4	15.3	8.0
Not specified	16.4	39.0	34.9	70.3	65.8	-	-	20.7	-
Unionized plants:									
Yes.....	2.8	6.6	6.0	5.9	6.6	25.9	56.6	6.0	26.6
Contract in effect:									
Yes.....	2.8	6.7	6.0	6.0	6.7	25.9	56.6	6.0	26.6
No.....	22.0	41.9	48.7	26.3	42.6	-	-	40.0	-
No.....	0.7	2.3	3.4	4.8	11.8	35.1	47.4	2.5	17.0
Not specified	22.7	46.3	41.1	18.8	-	-	-	31.9	-
See footnote at end of table.									

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-3—Continued								
	A	B	C	D	E	F	G	H	I
Percentage of products exported:									
None	2.4	4.8	9.2	13.4	20.8	68.2	41.1	4.6	33.5
Less than 10 percent	1.6	3.6	4.1	5.3	12.0	29.5	96.0	3.5	20.8
10 percent to 19 percent	3.1	5.8	6.4	7.8	13.3	40.6	50.5	7.0	32.5
20 percent to 49 percent	3.6	7.1	6.6	9.4	14.2	69.9	46.8	7.8	39.8
50 percent or more	7.1	12.2	17.6	19.3	22.3	24.8	17.5	13.4	56.6
Not specified	12.5	25.6	24.9	33.4	62.2	-	13.2	18.0	95.2
Value of goods and services:									
Less than \$750,000	7.4	13.5	29.7	50.1	67.3	-	-	10.0	39.3
\$750,000 to less than \$1 million	7.8	13.0	29.7	41.3	12.6	64.9	96.0	11.4	46.8
\$1 million to less than \$5 million	1.7	3.4	7.0	12.8	34.1	90.4	75.8	3.7	30.8
\$5 million to less than \$10 million ...	3.1	5.7	7.2	12.3	42.7	60.4	86.9	6.0	29.4
\$10 million to less than \$25 million	2.5	4.7	4.8	8.1	16.8	47.7	13.2	5.9	27.0
\$25 million to less than \$50 million	3.1	6.8	5.9	6.4	16.3	35.2	80.0	9.0	30.2
\$50 million to less than \$100 million	3.0	9.0	5.4	5.4	7.5	17.8	9.2	8.7	35.7
\$100 million or more	1.9	10.6	3.7	3.2	2.6	13.0	5.4	9.3	6.4
Not specified	11.9	25.8	17.4	33.0	46.8	-	12.5	14.5	53.0
Products made to military specifications:									
Yes	1.8	3.7	4.4	5.9	12.3	27.5	57.4	4.6	26.9
No	1.4	3.3	4.3	5.2	9.9	38.1	47.4	3.0	19.8
Don't know	5.2	9.7	12.4	15.8	24.5	35.9	-	8.8	41.0
Not specified	17.9	39.9	36.2	6.2	-	-	-	22.1	-
Prime contractor to defense agencies:									
Yes: Percent of products shipped ...	2.3	4.6	5.0	6.6	12.7	23.8	19.4	5.3	27.3
1 percent to 24 percent	2.7	5.2	5.9	7.5	15.7	35.5	6.7	6.0	32.7
25 percent to 74 percent	7.2	13.2	11.9	22.2	24.6	14.7	75.8	16.4	45.9
75 percent or more	9.3	24.4	18.3	11.6	39.0	6.2	6.0	18.7	48.1
Don't know	16.9	26.0	24.5	28.2	52.8	-	-	32.8	-
No	1.0	2.7	3.8	4.9	9.4	33.1	60.9	2.7	19.7
Don't know	6.7	13.8	14.8	17.2	36.0	7.9	-	11.4	44.4
Not specified	21.1	49.5	44.5	-	-	-	-	25.4	-
Subcontractor to defense agencies:									
Yes: Percent of products shipped ...	1.8	3.6	4.5	6.1	11.8	29.3	66.0	4.8	26.9
1 percent to 24 percent	2.5	4.6	5.8	7.5	13.6	23.3	77.6	5.9	35.8
25 percent to 74 percent	5.1	9.1	9.7	13.2	37.1	92.4	9.2	11.2	32.9
75 percent or more	9.4	16.8	16.1	24.1	19.4	56.2	7.6	22.5	94.7
Don't know	9.2	15.7	22.5	22.4	19.6	8.8	-	17.1	80.7
No	2.0	4.3	5.4	6.2	12.9	45.7	38.6	3.7	24.1
Don't know	2.6	5.2	6.2	7.4	13.8	35.8	70.2	4.8	23.4
Not specified	17.4	43.4	50.8	48.6	12.5	-	13.2	21.0	-
Foreign owned:									
Yes	4.2	8.7	8.9	9.0	15.7	62.2	7.8	9.2	39.8
No	0.6	2.2	3.2	4.5	9.0	28.0	52.3	2.3	16.1
Don't know	6.1	16.5	10.1	9.1	15.2	62.1	80.0	13.7	-
Not specified	14.6	34.5	37.7	34.3	12.5	-	13.2	19.0	96.9

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-4							
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	9.0	6.8	5.9	7.9	52.5	3.8	35.6
35, Industrial Machinery and Equipment	0.6	7.2	5.1	5.7	7.2	43.8	4.3	40.9
36, Electronic and Other Electric Equipment	0.8	8.0	5.6	5.6	6.3	27.9	3.8	38.5
37, Transportation Equipment	0.9	7.5	6.0	6.6	9.2	40.2	3.8	27.7
38, Instruments and Related Products	0.7	10.2	7.0	6.0	7.6	32.1	4.3	37.4
Age of plant:								
Less than 5 years	3.6	13.3	8.7	9.2	10.3	50.8	5.8	54.2
5 years to 14 years	2.2	8.7	6.3	6.0	6.7	31.3	4.1	36.9
15 years to 29 years	2.3	7.8	5.7	5.5	6.9	37.0	4.7	26.8
30 years or more	2.6	7.4	5.7	6.4	7.9	28.6	5.3	26.7
Not specified	14.2	89.3	54.9	45.2	75.4	-	15.8	62.1
Number of employees:								
Less than 20	4.7	25.6	19.1	14.7	13.7	43.3	6.2	34.2
20 to 99	1.1	6.7	5.1	4.8	5.2	30.7	2.8	26.4
100 to 499	1.4	5.1	3.6	3.6	4.9	22.9	4.0	25.8
500 to 999	2.0	4.8	2.8	4.1	6.2	58.9	10.1	18.4
1,000 or more	1.5	1.9	2.3	4.3	2.8	5.7	19.2	10.7
Not specified	16.4	89.5	44.4	41.3	49.4	-	20.3	-
Unionized plants:								
Yes	2.8	7.2	5.8	6.4	9.3	32.6	5.8	32.2
Contract in effect:								
Yes	2.8	7.3	5.9	6.4	9.4	32.6	5.9	32.2
No	22.0	37.3	27.5	51.2	53.1	-	35.8	-
No	0.7	5.0	3.5	3.5	4.1	20.1	2.3	18.1
Not specified	22.7	78.3	48.9	52.5	91.5	91.5	25.4	-
Percentage of products exported:								
None	2.4	10.9	8.2	8.4	9.2	34.7	4.3	28.2
Less than 10 percent	1.6	6.3	4.6	4.4	5.4	27.1	3.3	23.4
10 percent to 19 percent	3.1	9.3	6.6	6.5	8.1	31.7	6.8	67.0
20 percent to 49 percent	3.6	9.7	7.7	7.8	8.9	31.3	8.1	51.7
50 percent or more	7.1	17.0	15.5	17.2	19.7	20.1	12.7	17.5
Not specified	12.5	43.7	31.7	35.5	33.6	-	17.4	95.2
Value of goods and services:								
Less than \$750,000	7.4	62.2	31.5	23.9	22.6	53.7	9.0	41.5
\$750,000 to less than \$1 million	7.8	34.1	27.2	24.4	20.6	47.1	10.2	60.4
\$1 million to less than \$5 million	1.7	8.2	6.5	6.2	6.4	33.1	3.4	31.7
\$5 million to less than \$10 million	3.1	11.4	8.0	7.3	9.0	32.3	5.8	36.8
\$10 million to less than \$25 million	2.5	7.6	5.7	5.6	6.5	36.1	5.7	33.0
\$25 million to less than \$50 million	3.1	8.3	6.5	5.6	8.7	35.8	9.3	34.7
\$50 million to less than \$100 million	3.0	7.1	5.4	5.6	11.3	42.7	9.0	15.4
\$100 million or more	1.9	3.2	2.3	5.1	8.0	6.4	11.4	9.5
Not specified	11.9	51.4	23.5	31.9	43.6	-	15.6	-
Products made to military specifications:								
Yes	1.8	6.7	4.8	4.7	6.2	24.8	4.3	28.2
No	1.4	6.1	4.5	4.5	5.1	27.3	2.9	20.6
Don't know	5.2	17.6	12.8	12.3	13.1	57.0	8.8	59.1
Not specified	17.9	71.6	37.2	51.6	60.5	-	21.8	-
Prime contractor to defense agencies:								
Yes: Percent of products shipped	2.3	7.8	5.6	5.3	6.3	26.2	5.1	35.8
1 percent to 24 percent	2.7	9.0	6.5	6.1	7.0	31.8	5.8	46.4
25 percent to 74 percent	7.2	19.2	15.7	13.1	20.4	69.8	15.2	49.7
75 percent or more	9.3	31.5	17.5	20.7	21.5	48.8	17.7	19.1
Don't know	16.9	37.9	25.3	24.9	32.2	-	33.1	-
No	1.0	5.4	3.9	4.0	4.7	25.5	2.5	19.1
Don't know	6.7	14.2	16.4	16.2	16.3	41.2	11.3	51.5
Not specified	21.1	71.6	57.3	67.6	64.1	-	25.4	-

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-4—Continued										
	A	B	C	D	E	F	G	H			
Subcontractor to defense agencies:											
Yes: Percent of products shipped . . .	1.8	6.5	4.8	4.8	5.9	28.3	4.5	26.5			
1 percent to 24 percent	2.5	8.0	6.0	6.0	7.5	24.8	5.5	39.1			
25 percent to 74 percent	5.1	16.2	10.7	10.3	13.3	45.5	10.6	44.5			
75 percent or more	9.4	24.3	18.3	20.4	19.7	70.7	22.4	90.4			
Don't know	9.2	27.5	20.8	20.0	21.0	9.7	17.1	55.9			
No	2.0	7.6	5.8	5.7	6.3	24.8	3.5	24.6			
Don't know	2.6	9.1	6.6	6.3	8.0	49.0	4.5	36.4			
Not specified	17.4	65.8	45.9	67.6	55.4	-	21.4	-			
Foreign owned:											
Yes	4.2	13.7	8.5	8.2	13.2	49.9	8.7	15.0			
No	0.6	4.6	3.4	3.3	4.0	19.5	2.2	16.5			
Don't know	6.1	12.5	11.5	10.9	18.6	82.3	14.5	90.4			
Not specified	14.6	52.1	39.7	37.3	45.7	47.1	18.3	96.9			
	Relative standard errors for table 3-5										
	A	B	C	D	E	F	G	H	I	J	K
Major Group:											
34, Fabricated Metal Products	0.7	3.8	6.9	15.5	12.8	22.4	21.9	20.3	92.5	4.0	27.4
35, Industrial Machinery and Equipment	0.6	3.4	5.9	10.6	13.6	19.5	10.7	4.4	9.3	4.5	24.3
36, Electronic and Other Electric Equipment	0.8	3.6	5.9	10.9	10.9	15.7	24.1	4.4	7.1	4.0	33.5
37, Transportation Equipment	0.9	4.7	6.8	9.0	12.8	9.1	3.3	3.5	6.2	4.0	31.4
38, Instruments and Related Products	0.7	4.2	7.1	11.7	13.7	4.0	17.9	5.7	6.5	4.5	28.4
Age of plant:											
Less than 5 years	3.6	6.0	9.9	18.8	20.8	40.6	49.3	26.2	81.2	6.1	28.3
5 years to 14 years	2.2	4.0	6.8	12.7	14.3	16.3	30.5	6.4	12.1	4.2	25.0
15 years to 29 years	2.3	4.1	6.1	11.4	10.7	18.4	10.1	5.8	7.9	4.7	23.6
30 years or more	2.6	4.8	6.2	7.1	8.9	7.9	5.8	3.7	4.7	5.6	31.0
Not specified	14.2	39.1	49.6	65.2	17.0	-	-	-	17.0	16.0	66.0
Number of employees:											
Less than 20	4.7	8.4	29.3	56.4	96.0	-	-	-	92.5	6.4	26.4
20 to 99	1.1	2.7	5.6	13.0	20.2	56.0	-	-	-	2.9	21.5
100 to 499	1.4	2.7	3.6	6.4	9.5	15.3	32.8	39.3	-	4.2	26.0
500 to 999	2.0	4.6	2.6	4.5	6.2	7.4	21.1	6.6	19.6	11.1	5.7
1,000 or more	1.5	3.1	1.8	4.4	5.1	1.8	2.2	2.0	4.0	17.7	7.0
Not specified	16.4	37.5	41.2	90.4	-	-	-	-	-	20.3	92.5
Unionized plants:											
Yes	2.8	5.2	6.8	7.4	7.2	10.4	7.1	4.0	4.5	6.1	38.0
Contract in effect:											
Yes	2.8	5.2	6.9	7.3	7.3	10.2	7.2	4.1	4.5	6.1	38.5
No	22.0	39.3	31.6	52.8	26.0	89.1	17.5	12.8	-	35.8	12.5
No	0.7	2.2	3.8	7.5	8.3	13.0	15.3	3.8	43.2	2.4	15.0
Not specified	22.7	44.4	48.0	20.1	78.5	10.3	-	-	-	26.8	-
Percentage of products exported:											
None	2.4	4.9	9.2	17.3	20.2	25.7	19.5	13.4	8.5	4.4	31.1
Less than 10 percent	1.6	3.1	4.9	9.5	8.2	10.5	5.5	4.0	72.1	3.4	19.7
10 percent to 19 percent	3.1	5.1	7.3	11.3	12.0	29.4	23.7	10.1	8.3	6.8	32.6
20 percent to 49 percent	3.6	5.8	7.8	14.8	14.1	14.8	21.3	4.0	6.5	8.5	39.8
50 percent or more	7.1	12.2	15.1	22.1	49.3	39.8	10.1	4.7	13.4	13.6	41.6
Not specified	12.5	22.3	29.8	38.7	53.4	-	-	12.1	12.5	17.9	71.2

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-5—Continued										
	A	B	C	D	E	F	G	H	I	J	K
Value of goods and services:											
Less than \$750,000	7.4	13.4	35.6	38.9	96.0	-	-	-	-	9.5	39.2
\$750,000 to less than \$1 million	7.8	13.1	38.0	69.5	-	-	-	-	-	10.8	40.0
\$1 million to less than \$5 million	1.7	3.6	7.1	16.9	34.1	49.5	-	-	92.5	3.5	24.5
\$5 million to less than \$10 million ...	3.1	5.0	8.7	20.9	23.7	55.6	-	13.9	-	5.9	38.1
\$10 million to less than \$25 million ..	2.5	4.3	5.2	11.2	13.0	41.8	47.9	17.8	-	5.7	31.3
\$25 million to less than \$50 million ..	3.1	5.1	6.3	8.3	14.4	20.4	24.6	39.3	-	9.8	28.8
\$50 million to less than \$100 million ..	3.0	6.5	5.8	6.6	9.1	12.8	27.2	8.8	-	9.3	30.9
\$100 million or more	1.9	7.1	3.7	5.0	4.7	1.8	7.8	2.0	4.1	11.1	8.0
Not specified	11.9	24.0	23.5	55.0	17.0	81.0	-	26.1	11.9	15.6	-
Products made to military specifications:											
Yes	1.8	3.5	5.0	8.9	8.5	10.0	11.5	4.3	5.8	4.5	26.6
No	1.4	3.0	5.0	8.3	9.7	14.5	13.8	4.3	40.6	2.9	16.9
Don't know	5.2	8.3	13.7	28.8	15.7	19.2	31.7	5.8	8.8	9.1	59.8
Not specified	17.9	42.8	46.4	51.2	-	-	12.8	-	-	21.8	95.2
Prime contractor to defense agencies:											
Yes: Percent of products shipped	2.3	4.0	5.7	10.5	9.4	8.8	7.1	4.9	6.7	5.2	30.5
1 percent to 24 percent	2.7	4.5	6.6	12.5	11.8	11.8	12.3	6.3	9.0	5.9	39.5
25 percent to 74 percent	7.2	12.5	13.1	27.9	13.4	13.8	7.0	11.3	20.2	15.0	46.8
75 percent or more	9.3	18.8	25.1	13.8	14.6	6.6	11.1	8.0	10.0	18.2	14.1
Don't know	16.9	19.8	33.0	68.2	40.0	10.7	21.8	17.0	12.8	32.2	-
No	1.0	2.5	4.2	7.4	8.5	13.1	13.1	3.8	5.2	2.6	16.4
Don't know	6.7	10.9	18.2	33.2	16.8	21.1	30.1	5.2	72.1	11.8	47.7
Not specified	21.1	45.4	61.0	-	-	-	-	-	-	25.1	-
Subcontractor to defense agencies:											
Yes: Percent of products shipped	1.8	3.5	5.0	8.7	8.2	9.8	12.1	4.4	6.0	4.6	27.4
1 percent to 24 percent	2.5	4.4	6.5	10.5	10.4	13.5	17.9	3.2	7.8	5.6	43.2
25 percent to 74 percent	5.1	8.3	11.5	20.7	20.0	17.1	10.7	7.4	7.3	10.5	43.3
75 percent or more	9.4	15.1	18.2	30.9	28.5	7.6	9.2	31.7	34.9	24.8	11.2
Don't know	9.2	15.7	19.4	30.1	17.3	6.8	9.4	13.1	17.0	18.1	54.5
No	2.0	3.8	6.5	9.7	12.3	21.1	16.1	6.2	6.0	3.6	19.4
Don't know	2.6	4.6	6.8	14.5	14.0	14.0	16.8	3.9	59.0	4.6	28.3
Not specified	17.4	34.5	55.0	12.5	-	71.8	-	13.2	-	21.8	-
Foreign owned:											
Yes	4.2	7.6	9.0	15.0	12.7	27.4	39.7	6.2	24.8	8.7	32.0
No	0.6	2.1	3.7	6.9	7.5	7.6	8.9	3.6	26.1	2.2	14.7
Don't know	6.1	10.7	13.2	10.6	17.8	6.0	5.0	4.7	9.2	15.3	53.7
Not specified	14.6	25.7	52.1	34.7	8.0	71.9	-	10.8	-	19.4	88.0
Relative standard errors for table 3-6											
	A	B	C	D	E	F	G	H	I	J	
Major Group:											
34, Fabricated Metal Products	6.0	10.0	11.7	13.2	15.2	11.6	15.0	9.4	12.9	16.1	
35, Industrial Machinery and Equipment	5.4	8.3	11.6	10.6	13.9	10.0	13.2	8.2	10.2	14.0	
36, Electronic and Other Electric Equipment	5.5	8.8	11.1	9.9	13.1	9.4	14.6	7.6	11.4	14.3	
37, Transportation Equipment	6.1	8.7	11.8	10.6	14.2	9.3	16.3	8.7	10.5	15.0	
38, Instruments and Related Products	6.8	11.5	14.1	10.6	14.5	12.0	16.0	9.3	12.1	15.6	
Age of plant:											
Less than 5 years	10.1	15.3	25.8	15.6	21.9	17.7	22.5	14.4	17.2	27.2	
5 years to 14 years	6.2	9.6	13.2	11.0	14.6	10.7	14.8	9.3	10.8	15.1	
15 years to 29 years	5.7	8.5	10.1	9.8	14.1	9.6	13.6	7.7	10.2	13.5	
30 years or more	5.7	8.4	8.8	9.0	11.0	9.8	13.1	7.6	10.3	12.1	
Not specified	43.5	58.3	59.3	40.7	60.8	78.4	13.3	59.2	56.4	-	

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-6—Continued									
	A	B	C	D	E	F	G	H	I	J
Number of employees:										
Less than 20	15.9	22.9	41.4	30.8	29.8	33.0	35.9	21.8	36.9	78.0
20 to 99	4.9	7.6	11.1	10.3	12.2	9.6	11.5	7.6	9.9	14.6
100 to 499	3.7	5.7	6.3	7.0	9.0	6.2	10.5	5.1	6.7	8.4
500 to 999	3.5	4.5	7.5	4.5	5.3	5.9	13.8	3.3	5.8	7.3
1,000 or more	2.7	1.7	1.7	3.6	2.7	2.1	14.9	3.9	2.6	1.9
Not specified	32.9	47.6	72.5	50.7	81.4	72.9	13.3	35.3	62.4	-
Unionized plants:										
Yes	5.5	9.3	8.2	9.7	11.7	8.2	14.2	6.6	8.8	12.9
Contract in effect:										
Yes	5.6	9.5	8.2	8.9	11.8	8.3	14.5	6.8	9.0	13.1
No	27.1	40.8	6.8	79.9	8.1	44.0	61.1	30.1	38.7	5.9
No	3.6	5.5	7.6	6.6	8.8	6.6	8.8	5.4	7.0	9.1
Not specified	53.2	60.2	9.1	57.1	53.0	89.4	93.1	51.2	89.4	20.1
Percentage of products exported:										
None	8.2	12.2	17.6	19.7	20.4	16.3	19.3	12.4	17.0	19.9
Less than 10 percent	4.4	7.0	8.1	8.4	10.6	7.6	11.4	6.0	8.4	9.7
10 percent to 19 percent	6.8	10.4	11.4	12.0	14.7	11.6	14.9	9.4	11.2	12.0
20 percent to 49 percent	7.4	10.8	14.3	9.7	13.6	13.0	16.4	9.8	12.3	14.6
50 percent or more	12.5	16.4	20.4	19.6	24.7	24.0	32.6	17.0	27.6	25.1
Not specified	25.8	39.9	66.4	49.4	55.8	34.2	61.6	32.7	55.4	63.9
Value of goods and services:										
Less than \$750,000	24.4	41.6	65.0	64.3	48.9	69.4	32.4	36.9	49.0	36.2
\$750,000 to less than \$1 million	22.1	35.1	48.2	44.8	48.4	40.1	51.4	33.4	59.5	81.2
\$1 million to less than \$5 million	6.1	8.7	15.3	12.6	15.6	12.2	13.4	9.4	12.9	19.1
\$5 million to less than \$10 million	8.3	13.1	14.6	14.2	17.5	15.7	18.9	10.9	14.0	20.4
\$10 million to less than \$25 million	5.4	7.5	10.0	10.5	13.6	10.3	15.6	8.2	11.5	13.3
\$25 million to less than \$50 million	6.4	10.8	10.3	10.2	14.3	9.6	21.8	7.5	10.7	13.6
\$50 million to less than \$100 million	5.7	7.5	10.2	9.0	12.4	8.8	17.0	6.8	9.4	8.2
\$100 million or more	2.8	2.8	4.2	3.5	3.9	3.8	12.0	3.6	5.3	4.0
Not specified	41.5	48.9	49.2	32.9	48.5	43.7	73.5	66.7	59.5	8.8
Products made to military specifications:										
Yes	4.7	7.2	9.3	8.6	10.4	8.8	10.6	6.9	8.9	11.8
No	4.5	6.9	8.1	7.7	11.2	7.6	11.6	6.3	8.0	10.3
Don't know	12.5	17.5	20.9	19.1	23.3	17.4	32.3	16.2	22.8	38.9
Not specified	46.6	60.3	13.2	56.3	60.9	83.2	-	47.1	96.0	65.8
Prime contractor to defense agencies:										
Yes: Percent of products shipped	5.3	8.4	10.3	8.4	10.2	9.7	10.8	7.0	10.4	13.3
1 percent to 24 percent	6.0	9.6	12.4	9.8	12.5	11.1	13.2	8.1	11.9	14.9
25 percent to 74 percent	17.7	24.4	19.9	19.0	17.2	25.6	16.6	17.2	22.8	13.6
75 percent or more	19.9	40.8	18.4	26.4	17.3	15.0	16.1	25.3	39.6	10.4
Don't know	24.1	31.8	37.0	41.0	48.0	41.1	61.4	35.6	39.4	51.0
No	3.9	6.0	7.6	7.4	10.1	6.9	9.7	5.7	7.1	9.5
Don't know	16.2	24.3	24.3	19.0	26.5	14.4	51.8	18.2	30.4	19.0
Not specified	51.0	73.7	13.2	56.3	81.4	96.0	-	48.4	84.6	-

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-6—Continued											
	A	B	C	D	E	F	G	H	I	J		
Subcontractor to defense agencies:												
Yes: Percent of products shipped	4.7	7.4	9.1	8.7	10.6	8.4	10.3	6.6	9.1	11.5		
1 percent to 24 percent	5.8	9.3	11.0	10.8	12.7	10.5	12.7	8.2	11.2	14.2		
25 percent to 74 percent	11.9	17.1	22.9	19.5	20.2	22.1	22.3	15.3	22.0	26.5		
75 percent or more	19.2	29.6	31.0	32.8	37.9	26.1	38.2	27.6	35.0	26.4		
Don't know	17.3	25.7	36.1	29.8	50.4	26.5	36.1	22.8	23.4	33.9		
No	5.7	8.7	10.7	9.4	13.1	9.8	15.4	7.7	10.0	10.5		
Don't know	6.5	9.6	10.3	10.6	15.3	10.2	16.7	9.7	11.4	18.9		
Not specified	56.7	52.2	93.5	69.0	60.9	67.1	-	47.4	62.8	-		
Foreign owned:												
Yes	8.1	11.1	17.1	13.0	17.0	12.5	20.2	9.9	14.4	14.6		
No	3.3	5.2	6.5	6.3	8.2	6.2	8.4	5.0	6.5	8.7		
Don't know	11.4	11.3	14.4	16.1	17.3	11.9	27.4	14.6	16.7	20.3		
Not specified	34.4	32.6	77.8	57.8	70.4	44.9	-	46.6	36.6	-		
	Relative standard errors for table 3-7											
	A	B	C	D	E	F	G	H	I	J	K	L
Major Group:												
34, Fabricated Metal Products	3.8	6.8	8.0	7.6	8.4	21.8	17.0	15.4	14.9	16.9	21.3	13.9
35, Industrial Machinery and Equipment	3.5	6.4	6.9	7.2	7.3	17.4	18.2	12.4	16.7	16.7	18.8	10.6
36, Electronic and Other Electric Equipment	3.6	6.4	6.9	7.9	7.3	22.4	16.2	11.7	14.3	16.1	18.1	12.1
37, Transportation Equipment	3.9	7.1	8.4	8.6	7.4	17.6	18.8	11.5	14.4	15.0	17.1	10.6
38, Instruments and Related Products	4.5	7.0	9.2	11.8	8.7	32.5	18.1	12.7	16.4	20.2	24.2	13.6
Age of plant:												
Less than 5 years	6.7	10.4	11.3	14.1	10.9	75.1	26.9	20.2	24.8	25.4	29.3	19.1
5 years to 14 years	4.3	6.6	7.6	8.3	7.9	33.4	17.6	12.6	14.4	14.9	15.6	12.3
15 years to 29 years	4.1	6.3	7.5	7.5	7.3	22.3	12.1	11.8	14.0	14.4	18.9	11.0
30 years or more	4.2	6.7	7.0	7.5	7.7	12.6	18.8	12.1	14.4	18.5	21.5	10.3
Not specified	37.6	47.2	70.3	67.5	71.3	-	-	62.0	-	-	67.4	17.0
Number of employees:												
Less than 20	8.8	13.5	14.7	18.6	15.4	50.3	45.8	34.1	38.6	29.7	50.9	21.2
20 to 99	3.0	4.9	5.6	6.2	6.4	21.6	13.1	11.6	12.6	12.0	15.8	9.5
100 to 499	2.7	4.6	5.4	4.7	4.6	13.9	9.7	6.3	8.6	10.7	11.8	7.7
500 to 999	3.1	4.9	5.8	4.9	3.6	9.0	10.4	6.8	8.6	15.8	13.8	9.1
1,000 or more	1.9	1.6	1.5	5.2	5.5	2.1	4.9	9.2	6.1	11.8	2.4	1.8
Not specified	30.2	40.5	58.6	46.7	73.5	-	-	49.9	-	-	-	57.6
Unionized plants:												
Yes	4.4	7.1	8.1	7.9	7.8	11.2	18.1	11.6	14.9	19.0	18.4	11.8
Contract in effect:												
Yes	4.4	7.1	7.7	7.9	7.7	11.2	18.3	11.8	14.7	19.1	18.8	11.5
No	34.6	47.9	48.2	54.3	77.6	29.2	82.3	36.9	73.6	17.5	69.8	63.9
No	2.3	3.9	4.5	4.9	4.7	59.4	10.3	8.0	9.2	9.8	11.5	7.0
Not specified	45.0	50.7	84.7	60.6	71.4	26.7	-	84.7	-	93.1	-	14.2
Percentage of products exported:												
None	5.2	8.6	9.6	10.3	9.9	32.5	21.2	18.5	18.2	16.7	25.6	13.9
Less than 10 percent	3.0	4.9	5.6	5.7	6.0	15.0	11.7	8.9	11.9	12.9	13.2	9.0
10 percent to 19 percent	5.0	8.5	9.1	8.7	7.8	17.3	18.1	12.6	15.6	18.8	19.7	12.9
20 percent to 49 percent	5.8	8.9	9.9	11.7	9.4	27.6	27.0	16.6	19.4	19.2	31.1	13.2
50 percent or more	12.6	17.9	24.5	30.1	17.0	51.0	36.3	21.0	37.1	30.3	46.3	22.4
Not specified	21.8	27.2	37.2	41.7	41.8	90.4	52.7	49.2	58.1	67.6	9.8	50.7

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-7—Continued											
	A	B	C	D	E	F	G	H	I	J	K	L
Value of goods and services:												
Less than \$750,000	15.6	20.7	24.6	31.9	24.1	97.8	78.7	43.5	51.2	41.7	57.9	37.8
\$750,000 to less than \$1 million	14.0	20.0	23.3	26.3	22.3	96.2	75.1	46.9	50.7	59.1	91.5	53.9
\$1 million to less than \$5 million	3.6	5.9	6.4	7.5	7.7	29.0	16.8	15.3	16.6	13.9	21.0	11.2
\$5 million to less than \$10 million ...	5.7	8.6	10.4	10.1	10.9	24.1	16.9	18.9	17.8	21.8	22.4	14.9
\$10 million to less than \$25 million ..	4.0	6.5	6.8	7.0	7.1	16.2	12.4	9.8	16.5	17.3	17.3	12.0
\$25 million to less than \$50 million ..	5.1	7.3	7.8	8.2	9.0	29.7	19.9	10.1	15.0	17.9	18.7	12.3
\$50 million to less than \$100 million ..	4.7	7.8	8.5	8.0	7.1	19.8	13.0	11.8	13.2	17.3	20.7	8.5
\$100 million or more	2.6	2.3	3.2	5.2	4.3	6.8	12.5	7.6	6.3	13.2	5.8	6.2
Not specified	28.4	36.7	28.9	48.3	57.1	93.1	85.2	54.5	71.4	93.7	26.1	36.7
Products made to military specifications:												
Yes	3.3	5.4	6.3	6.5	6.5	15.0	14.1	10.1	11.2	12.5	15.7	9.2
No	3.1	5.0	5.6	6.0	5.6	17.1	12.1	9.3	11.7	13.2	14.1	8.2
Don't know	8.4	12.4	15.4	14.6	14.8	41.4	35.6	27.4	32.1	26.4	29.7	23.7
Not specified	34.7	61.0	51.4	56.4	63.8	-	-	66.4	89.2	-	74.1	-
Prime contractor to defense agencies:												
Yes: Percent of products shipped ...	3.9	5.9	7.3	7.9	7.0	17.5	16.5	10.5	12.6	13.4	18.4	10.3
1 percent to 24 percent	4.4	6.9	8.2	8.7	8.0	20.2	18.9	12.4	14.2	15.9	22.0	12.1
25 percent to 74 percent	10.9	13.8	15.1	20.1	22.6	38.2	38.2	18.6	26.8	33.1	38.3	29.3
75 percent or more	15.2	18.7	34.3	44.7	11.2	4.1	27.0	19.9	25.1	18.2	52.0	29.1
Don't know	19.3	33.0	41.4	46.7	28.4	79.0	51.8	34.5	48.2	76.0	84.7	50.0
No	2.6	4.4	4.9	5.1	5.0	14.6	10.8	8.7	10.2	11.1	12.3	7.8
Don't know	11.7	15.0	21.1	22.6	21.2	44.8	44.9	24.6	25.0	27.1	32.8	29.3
Not specified	42.9	67.5	66.0	67.5	-	-	-	84.7	-	-	-	-
Subcontractor to defense agencies:												
Yes: Percent of products shipped ...	3.3	5.5	6.1	6.6	6.5	14.8	13.1	9.7	12.2	12.1	16.2	9.0
1 percent to 24 percent	4.2	6.8	7.9	7.9	8.3	17.7	17.4	12.1	14.8	16.4	20.5	10.8
25 percent to 74 percent	8.0	11.9	14.1	17.3	14.7	37.0	22.9	16.2	25.7	22.9	27.9	20.0
75 percent or more	13.9	23.2	20.4	24.9	22.3	35.9	47.5	34.9	27.8	29.8	75.4	37.3
Don't know	13.8	23.3	23.2	25.8	19.8	63.8	45.9	31.7	45.7	36.0	50.3	40.7
No	4.0	6.1	7.0	7.1	7.4	25.4	15.4	12.6	13.4	16.5	17.7	10.0
Don't know	4.6	7.1	8.2	8.6	7.4	19.9	20.0	12.9	15.5	19.4	16.9	13.5
Not specified	43.6	56.6	59.5	54.4	74.9	-	26.7	84.7	97.5	-	81.0	12.5
Foreign owned:												
Yes	6.8	11.2	13.1	12.2	10.9	24.7	23.5	15.8	19.7	25.8	23.8	16.2
No	2.1	3.7	4.1	4.5	4.4	12.7	9.8	7.5	8.5	9.5	11.2	6.7
Don't know	8.4	11.8	14.7	14.0	13.3	27.5	23.7	18.3	24.4	22.0	28.3	18.0
Not specified	26.8	40.2	51.0	51.8	34.5	-	25.6	41.6	93.4	6.7	85.3	17.0
Relative standard errors for table 3-8												
	A	B	C	D	E	F	G	H	I	J		
Major Group:												
34, Fabricated Metal Products	4.0	3.6	6.4	6.4	8.8	11.2	7.9	10.5	33.4	3.7		
35, Industrial Machinery and Equipment	3.2	2.6	5.3	5.5	8.9	8.6	6.0	8.7	24.1	4.3		
36, Electronic and Other Electric Equipment	3.2	3.0	5.3	5.8	8.1	8.1	6.3	10.7	24.8	3.6		
37, Transportation Equipment	3.9	3.5	6.2	6.4	8.8	10.4	7.4	11.4	24.2	3.7		
38, Instruments and Related Products	3.8	3.5	6.6	6.8	9.7	10.7	7.3	12.3	25.3	4.2		
Age of plant:												
Less than 5 years	6.1	5.5	8.4	10.0	13.5	13.5	11.1	15.1	27.5	5.8		
5 years to 14 years	4.1	3.7	6.1	6.5	9.0	9.6	6.8	9.4	22.5	4.0		
15 years to 29 years	3.8	3.5	5.6	5.6	8.2	8.5	6.4	9.8	25.9	4.5		
30 years or more	4.0	3.8	5.8	6.0	8.2	8.6	7.1	11.0	15.0	5.2		
Not specified	39.8	38.0	14.5	58.3	47.6	14.4	51.1	62.1	73.9	15.8		

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-8—Continued									
	A	B	C	D	E	F	G	H	I	J
Number of employees:										
Less than 20	10.1	9.7	15.8	16.4	23.9	22.1	16.6	25.1	53.8	6.2
20 to 99	3.1	2.6	4.9	5.1	7.5	8.9	5.7	6.9	20.5	2.7
100 to 499	2.3	2.2	3.5	3.5	5.1	5.3	4.3	7.4	15.5	3.9
500 to 999	2.5	2.2	3.0	3.2	5.7	5.8	4.1	8.4	3.6	10.1
1,000 or more	1.6	1.7	2.7	2.5	4.4	1.7	3.0	5.1	13.0	14.0
Not specified	31.9	28.7	46.5	46.9	54.0	29.9	59.2	53.3	-	20.4
Unionized plants:										
Yes	4.1	3.9	5.5	6.1	8.2	9.5	7.0	14.1	26.9	5.8
Contract in effect:										
Yes	4.2	4.0	5.6	6.2	8.3	9.3	6.9	14.3	27.1	5.9
No	23.8	27.7	25.8	33.9	48.3	70.3	76.5	49.9	14.4	36.7
No	2.2	1.9	3.5	3.7	5.2	5.5	4.0	5.7	15.1	2.3
Not specified	51.8	40.4	58.5	69.5	60.6	26.7	50.3	62.1	-	26.3
Percentage of products exported:										
None	5.4	4.8	8.6	8.7	11.3	18.7	9.5	10.9	25.6	4.2
Less than 10 percent	3.0	2.7	4.5	4.6	6.4	6.8	5.4	7.8	17.6	3.3
10 percent to 19 percent	4.5	4.3	6.2	6.9	9.5	9.4	7.5	11.4	28.7	6.4
20 percent to 49 percent	5.0	4.8	7.1	7.8	11.5	10.6	7.2	15.9	22.7	7.6
50 percent or more	10.0	10.0	12.9	13.7	21.8	17.7	15.7	35.2	-	12.7
Not specified	24.0	22.3	28.9	31.9	56.4	55.1	31.3	38.0	81.2	16.9
Value of goods and services:										
Less than \$750,000	17.6	17.3	25.7	30.5	39.7	33.0	33.6	48.9	85.4	8.9
\$750,000 to less than										
\$1 million	15.9	14.7	24.2	24.4	33.1	47.1	24.3	35.0	63.5	10.5
\$1 million to less than										
\$5 million	4.0	3.4	6.3	6.8	9.7	13.0	7.2	8.5	22.4	3.3
\$5 million to less than										
\$10 million	5.3	4.9	7.6	8.0	10.5	11.2	8.1	11.6	34.1	5.7
\$10 million to less than										
\$25 million	3.7	3.5	5.5	5.3	9.0	7.8	6.2	10.9	21.0	5.5
\$25 million to less than										
\$50 million	4.2	4.1	6.0	5.7	8.5	8.3	8.0	13.9	22.9	8.9
\$50 million to less than										
\$100 million	4.0	3.6	5.8	5.2	7.9	9.8	7.4	9.6	16.2	9.0
\$100 million or more	2.3	2.0	2.9	2.8	5.8	3.2	2.3	8.8	6.2	11.0
Not specified	21.3	21.9	29.3	44.0	41.5	27.0	37.0	45.1	12.8	15.7
Products made to military specifications:										
Yes	3.1	2.8	4.8	4.9	7.0	7.8	5.6	7.9	21.8	4.2
No	2.9	2.7	4.3	4.6	6.7	6.4	5.0	7.8	17.8	2.8
Don't know	8.7	7.8	11.4	12.6	14.9	18.5	15.0	22.2	30.0	8.3
Not specified	39.6	35.1	41.2	79.9	59.8	-	54.9	58.1	-	21.8
Prime contractor to defense agencies:										
Yes: Percent of products shipped	3.6	3.4	5.4	5.6	8.2	8.0	6.1	10.3	18.0	4.9
1 percent to 24 percent	4.2	3.9	6.1	6.3	9.3	8.6	7.1	11.5	21.4	5.6
25 percent to 74 percent	10.4	9.9	14.5	15.6	21.8	34.0	13.4	23.0	34.7	13.9
75 percent or more	12.8	13.4	21.9	23.5	27.9	36.2	13.3	45.3	6.3	17.1
Don't know	18.8	18.5	26.3	23.5	42.1	39.1	26.3	65.2	78.0	29.7
No	2.5	2.2	3.9	4.1	5.7	6.3	4.6	6.3	16.6	2.5
Don't know	11.2	10.3	13.9	15.7	19.5	15.4	16.4	35.6	30.6	10.7
Not specified	52.4	46.2	13.2	13.2	57.3	68.9	59.2	62.1	-	25.1

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-8—Continued									
	A	B	C	D	E	F	G	H	I	J
Subcontractor to defense agencies:										
Yes: Percent of products shipped	3.1	2.8	4.8	4.9	7.3	7.7	5.3	7.7	23.2	4.3
1 percent to 24 percent	4.1	3.6	6.0	6.0	8.8	9.4	6.7	9.7	29.2	5.3
25 percent to 74 percent	7.4	7.0	11.3	11.6	17.3	18.6	11.4	16.8	25.6	10.1
75 percent or more	13.1	12.1	16.7	18.8	32.4	26.6	18.3	28.7	69.2	22.8
Don't know	15.3	13.2	18.4	20.6	20.5	24.3	22.8	34.8	11.2	15.8
No	3.7	3.5	5.4	5.7	8.0	8.0	7.0	9.7	20.9	3.4
Don't know	4.4	4.1	6.4	6.7	9.1	9.7	7.5	12.2	24.0	4.4
Not specified	32.5	32.1	73.5	72.3	48.4	-	43.4	51.2	-	21.4
Foreign owned:										
Yes	6.2	5.7	8.9	9.6	11.3	13.0	9.9	17.9	26.7	8.5
No	2.0	1.8	3.3	3.4	5.1	5.3	3.9	5.6	14.4	2.1
Don't know	8.6	7.9	11.2	10.2	13.4	20.9	12.3	17.4	39.2	14.0
Not specified	27.1	26.5	44.2	51.1	44.8	63.2	36.3	37.7	-	19.0
Relative standard errors for table 3-9										
	A	B	C	D	E	F	G	H		
Major Group:										
34, Fabricated Metal Products	0.7	5.9	6.7	7.3	8.4	9.8	5.2		30.0	
35, Industrial Machinery and Equipment	0.6	6.0	6.1	6.4	6.5	7.0	5.9		32.5	
36, Electronic and Other Electric Equipment	0.8	5.7	6.4	6.4	6.8	6.9	5.3		28.5	
37, Transportation Equipment	0.9	6.0	8.5	7.4	7.3	7.9	5.2		28.0	
38, Instruments and Related Products	0.7	6.3	7.4	7.4	7.7	9.3	6.1		41.5	
Age of plant:										
Less than 5 years	3.6	8.1	10.0	9.7	11.2	11.0	7.6		39.5	
5 years to 14 years	2.2	5.9	6.7	7.1	7.7	7.6	5.2		26.9	
15 years to 29 years	2.3	5.8	6.5	6.5	6.8	7.7	5.9		26.4	
30 years or more	2.6	6.4	6.7	6.7	7.5	8.6	6.8		24.7	
Not specified	14.2	46.2	69.9	67.4	58.8	63.2	15.8		30.7	
Number of employees:										
Less than 20	4.7	10.4	15.5	16.5	19.5	31.3	7.2		46.2	
20 to 99	1.1	4.1	5.1	5.6	6.2	6.3	3.7		20.7	
100 to 499	1.4	4.6	3.9	4.3	4.2	5.2	5.5		24.4	
500 to 999	2.0	6.9	4.3	4.5	3.8	4.8	8.9		8.3	
1,000 or more	1.5	11.0	3.1	1.2	2.3	3.1	17.7		7.7	
Not specified	16.4	48.3	45.9	48.0	40.8	56.2	20.7		92.5	
Unionized plants:										
Yes	2.8	6.8	7.4	6.9	7.3	6.7	7.8		26.1	
Contract in effect:										
Yes	2.8	6.8	7.5	6.9	7.5	6.8	7.8		26.1	
No	22.0	30.3	45.6	31.5	35.3	23.0	43.4		-	
No	0.7	3.4	3.9	4.1	4.3	4.6	3.1		17.8	
Not specified	22.7	47.9	35.1	83.7	47.0	54.9	27.5		-	
Percentage of products exported:										
None	2.4	7.1	9.3	9.4	10.4	10.0	5.2		32.2	
Less than 10 percent	1.6	4.4	4.8	5.1	5.7	6.5	4.3		23.5	
10 percent to 19 percent	3.1	7.5	7.6	7.4	7.8	9.2	9.0		33.5	
20 percent to 49 percent	3.6	8.6	9.7	8.3	8.0	9.0	10.9		58.6	
50 percent or more	7.1	18.2	17.7	18.8	18.7	15.0	15.8		11.0	
Not specified	12.5	26.5	35.3	33.3	48.9	34.2	20.7		59.6	

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-9—Continued							
	A	B	C	D	E	F	G	H
Value of goods and services:								
Less than \$750,000	7.4	16.4	22.8	28.5	45.1	37.8	10.1	65.6
\$750,000 to less than \$1 million	7.8	15.0	25.8	24.8	32.5	35.1	12.7	44.3
\$1 million to less than \$5 million	1.7	5.0	6.7	7.1	7.6	7.9	4.4	26.9
\$5 million to less than \$10 million ...	3.1	7.5	7.8	8.5	9.9	10.8	7.7	40.0
\$10 million to less than \$25 million ..	2.5	5.5	6.2	6.6	6.7	7.8	8.1	33.0
\$25 million to less than \$50 million ..	3.1	9.6	7.1	6.5	7.2	8.5	12.4	38.9
\$50 million to less than \$100 million ..	3.0	9.9	7.0	7.0	6.3	6.9	10.8	42.9
\$100 million or more	1.9	7.4	6.7	4.3	3.3	3.4	12.6	7.6
Not specified	11.9	30.6	40.8	48.6	35.8	32.2	15.5	76.7
Products made to military specifications:								
Yes	1.8	5.4	5.5	5.5	5.7	6.2	5.9	24.5
No	1.4	4.1	4.9	5.1	5.7	6.2	3.6	17.9
Don't know	5.2	11.3	13.4	14.7	15.8	15.1	11.0	74.0
Not specified	17.9	66.0	76.4	40.7	66.9	62.1	21.8	-
Prime contractor to defense agencies:								
Yes: Percent of products shipped ...	2.3	5.9	6.3	5.9	6.4	7.6	6.6	35.4
1 percent to 24 percent	2.7	6.7	7.2	6.8	7.3	8.7	7.5	42.1
25 percent to 74 percent	7.2	16.1	20.4	15.5	16.6	18.3	20.4	59.4
75 percent or more	9.3	20.9	20.2	15.8	12.8	30.9	19.7	33.1
Don't know	16.9	38.1	29.6	26.6	33.5	29.2	34.3	-
No	1.0	3.7	4.3	4.5	5.0	5.3	3.4	16.3
Don't know	6.7	18.6	16.7	17.9	18.3	17.8	12.6	79.2
Not specified	21.1	66.0	68.9	60.9	81.4	62.1	26.0	90.4
Subcontractor to defense agencies:								
Yes: Percent of products shipped ...	1.8	5.6	5.5	5.3	5.7	6.1	6.0	28.5
1 percent to 24 percent	2.5	6.7	6.8	6.5	7.3	7.7	7.6	32.0
25 percent to 74 percent	5.1	12.7	12.6	11.7	11.9	14.6	13.0	65.8
75 percent or more	9.4	30.2	21.8	24.0	20.4	19.7	22.0	90.4
Don't know	9.2	19.4	23.4	24.5	26.5	24.8	20.7	92.4
No	2.0	4.9	6.3	6.6	6.8	7.6	4.4	22.1
Don't know	2.6	6.3	6.9	7.6	8.3	8.8	5.7	29.0
Not specified	17.4	46.4	60.4	57.9	43.2	55.8	22.4	90.4
Foreign owned:								
Yes	4.2	11.3	9.0	9.8	9.7	12.8	11.4	34.0
No	0.6	3.2	3.7	3.8	4.2	4.5	2.9	16.7
Don't know	6.1	14.4	14.1	14.5	13.2	16.2	17.6	82.9
Not specified	14.6	31.1	57.6	34.6	54.7	39.0	21.8	67.3
Relative standard errors for table 3-10								
	A	B	C	D	E	F	G	
Major Group:								
34, Fabricated Metal Products	0.7	36.7	7.4	5.4	4.4	4.8		31.3
35, Industrial Machinery and Equipment	0.6	32.7	6.2	4.5	4.2	5.3		30.0
36, Electronic and Other Electric Equipment	0.8	21.8	5.5	4.7	4.4	4.8		31.0
37, Transportation Equipment	0.9	38.3	7.6	5.2	4.9	4.6		33.7
38, Instruments and Related Products	0.7	27.8	7.5	5.4	5.1	5.2		37.3
Age of plant:								
Less than 5 years	3.6	34.6	9.7	7.9	7.0	6.8		39.6
5 years to 14 years	2.2	28.2	7.0	5.3	4.6	4.8		25.1
15 years to 29 years	2.3	22.5	6.1	5.0	4.7	5.4		40.8
30 years or more	2.6	27.3	6.6	5.0	5.4	6.0		31.2
Not specified	14.2	-	40.5	66.8	43.4	15.4		-

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-10—Continued						
	A	B	C	D	E	F	G
Number of employees:							
Less than 20	4.7	45.4	20.9	14.0	9.0	7.0	36.5
20 to 99	1.1	24.2	5.8	4.2	3.2	3.4	23.6
100 to 499	1.4	15.4	4.1	2.9	3.6	4.6	20.0
500 to 999	2.0	18.5	4.4	2.5	4.5	7.2	18.2
1,000 or more	1.5	30.2	2.9	1.5	5.1	11.8	11.3
Not specified	16.4	-	50.6	33.3	48.0	19.7	-
Unionized plants:							
Yes	2.8	25.4	5.6	5.2	5.7	7.0	24.0
Contract in effect:							
Yes	2.8	25.8	5.7	5.3	5.7	7.0	24.0
No	22.0	13.3	34.6	29.0	41.0	45.0	-
No	0.7	16.8	3.9	3.0	2.6	2.8	18.2
Not specified	22.7	91.7	30.4	71.0	50.3	27.5	-
Percentage of products exported:							
None	2.4	31.6	10.6	7.2	5.5	4.9	39.2
Less than 10 percent	1.6	25.1	5.0	3.8	3.6	3.9	22.8
10 percent to 19 percent	3.1	24.1	7.3	5.7	6.2	7.6	29.1
20 percent to 49 percent	3.6	29.0	7.9	6.0	7.3	9.4	54.7
50 percent or more	7.1	49.9	19.5	11.5	14.4	14.6	69.9
Not specified	12.5	94.1	31.4	26.5	24.3	19.7	67.1
Value of goods and services:							
Less than \$750,000	7.4	71.3	33.2	23.7	16.6	9.6	40.9
\$750,000 to less than \$1 million	7.8	80.0	30.2	27.6	12.0	12.5	62.1
\$1 million to less than \$5 million	1.7	32.3	7.4	5.3	4.0	4.1	27.3
\$5 million to less than \$10 million	3.1	33.0	8.6	6.7	6.0	6.8	43.8
\$10 million to less than \$25 million	2.5	21.4	5.8	4.9	5.2	6.4	30.5
\$25 million to less than \$50 million	3.1	24.1	6.7	5.0	6.8	10.7	32.3
\$50 million to less than \$100 million	3.0	24.3	6.0	4.7	7.1	9.4	45.7
\$100 million or more	1.9	22.2	3.7	2.6	4.8	9.9	24.8
Not specified	11.9	12.5	33.9	34.4	27.3	14.9	68.7
Products made to military specifications:							
Yes	1.8	23.1	5.4	4.0	4.1	5.4	25.1
No	1.4	19.4	4.8	3.9	3.5	3.3	22.5
Don't know	5.2	51.4	14.9	11.9	8.8	10.0	48.2
Not specified	17.9	-	55.6	55.9	53.8	21.3	-
Prime contractor to defense agencies:							
Yes: Percent of products shipped	2.3	25.2	6.4	4.5	4.8	5.8	35.2
1 percent to 24 percent	2.7	23.4	7.2	5.2	5.6	6.7	34.2
25 percent to 74 percent	7.2	72.1	17.9	12.6	13.3	16.2	79.3
75 percent or more	9.3	-	18.6	12.6	19.1	17.4	34.9
Don't know	16.9	86.9	27.7	24.8	30.2	33.9	97.8
No	1.0	17.4	4.3	3.4	2.9	3.0	19.3
Don't know	6.7	72.2	16.7	13.6	11.9	13.0	46.0
Not specified	21.1	-	61.0	56.4	69.6	24.8	90.4
Subcontractor to defense agencies:							
Yes: Percent of products shipped	1.8	24.2	5.3	3.9	4.2	5.5	27.6
1 percent to 24 percent	2.5	28.7	6.5	4.8	5.5	6.8	32.5
25 percent to 74 percent	5.1	38.5	13.4	8.8	9.3	12.4	76.0
75 percent or more	9.4	81.4	19.6	17.7	15.9	20.0	49.7
Don't know	9.2	28.9	23.7	18.3	15.3	19.9	91.5
No	2.0	16.9	6.0	5.0	4.3	4.0	26.0
Don't know	2.6	33.6	7.1	6.0	5.0	5.2	28.3
Not specified	17.4	-	49.8	32.9	43.8	21.6	90.4

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-10—Continued							
	A	B	C	D	E	F	G	
Foreign owned:								
Yes.....	4.2	36.2	9.7	7.7	8.3	10.1	39.4	
No.....	0.6	16.0	3.8	2.8	2.4	2.7	18.4	
Don't know.....	6.1	9.8	11.1	10.7	11.8	15.6	57.4	
Not specified.....	14.6	-	38.4	40.9	32.1	19.9	61.5	
	Relative standard errors for table 3-11							
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products.....	0.7	4.6	4.9	9.0	16.6	25.1	4.3	27.1
35, Industrial Machinery and Equipment.....	0.6	4.2	3.8	8.2	10.6	8.8	4.9	27.1
36, Electronic and Other Electric Equipment.....	0.8	3.9	4.7	7.6	14.3	10.2	4.6	27.5
37, Transportation Equipment.....	0.9	5.5	5.5	7.5	13.4	7.2	4.2	37.6
38, Instruments and Related Products.....	0.7	4.6	5.2	9.0	14.8	5.4	5.1	35.6
Age of plant:								
Less than 5 years.....	3.6	6.7	7.2	15.0	36.8	30.1	6.5	37.5
5 years to 14 years.....	2.2	4.4	5.1	9.2	14.7	15.5	4.6	26.8
15 years to 29 years.....	2.3	4.7	4.7	7.5	11.5	5.4	5.2	22.8
30 years or more.....	2.6	5.5	5.2	6.0	8.5	5.6	5.8	25.2
Not specified.....	14.2	66.1	58.5	13.2	51.3	17.0	14.9	-
Number of employees:								
Less than 20.....	4.7	8.6	14.1	64.6	-	-	6.7	35.4
20 to 99.....	1.1	3.0	3.6	15.5	52.3	87.8	3.2	20.9
100 to 499.....	1.4	3.6	2.9	4.6	14.0	23.6	4.4	19.0
500 to 999.....	2.0	4.9	4.1	3.1	6.9	10.7	5.8	8.3
1,000 or more.....	1.5	2.2	1.7	2.7	4.7	3.8	10.4	9.1
Not specified.....	16.4	38.9	43.6	6.7	59.2	12.5	19.3	-
Unionized plants:								
Yes.....	2.8	6.0	5.5	5.6	5.1	5.5	6.5	24.3
Contract in effect:								
Yes.....	2.8	6.0	5.6	5.6	5.3	5.6	6.5	24.3
No.....	22.0	36.9	30.3	36.0	8.7	25.6	45.2	-
No.....	0.7	2.5	2.7	5.5	9.3	8.3	2.7	15.9
Not specified.....	22.7	46.3	65.9	10.0	51.4	-	26.5	-
Percentage of products exported:								
None.....	2.4	5.6	6.4	16.6	24.4	26.1	4.6	33.6
Less than 10 percent.....	1.6	3.5	3.7	6.1	10.5	6.5	3.8	17.9
10 percent to 19 percent.....	3.1	5.9	5.8	7.6	13.3	12.9	7.1	37.8
20 percent to 49 percent.....	3.6	6.8	6.4	8.9	10.9	12.2	9.1	40.4
50 percent or more.....	7.1	13.2	14.8	14.8	34.0	5.0	13.8	17.8
Not specified.....	12.5	26.9	28.5	36.5	39.8	40.1	18.8	67.1
Value of goods and services:								
Less than \$750,000.....	7.4	14.5	26.3	64.3	-	-	9.6	44.2
\$750,000 to less than \$1 million....	7.8	12.8	20.7	-	-	-	11.6	56.1
\$1 million to less than \$5 million....	1.7	3.9	4.6	23.2	-	87.8	3.9	23.6
\$5 million to less than \$10 million...	3.1	5.5	6.0	19.3	57.1	13.9	6.7	35.1
\$10 million to less than \$25 million..	2.5	5.0	4.5	7.4	25.0	40.8	6.3	25.1
\$25 million to less than \$50 million..	3.1	7.7	4.8	7.0	17.2	32.5	9.8	31.9
\$50 million to less than \$100 million..	3.0	8.5	5.5	5.4	12.0	15.6	8.6	56.5
\$100 million or more.....	1.9	4.3	5.0	3.4	3.3	4.7	8.6	9.1
Not specified.....	11.9	30.2	30.6	43.0	40.6	14.8	14.5	68.7

See footnote at end of table.

Table D-3. Estimates of Relative Standard Errors for Tables in Fabrication and Machining—Continued

Plant characteristic	Relative standard errors for table 3-11—Continued							
	A	B	C	D	E	F	G	H
Products made to military specifications:								
Yes.....	1.8	4.0	3.8	6.4	10.0	7.5	5.0	22.1
No.....	1.4	3.3	3.7	5.7	9.2	8.2	3.2	18.8
Don't know.....	5.2	9.5	11.0	18.4	21.2	5.8	9.2	44.0
Not specified.....	17.9	63.2	48.6	6.7	59.2	12.8	21.1	-
Prime contractor to defense agencies:								
Yes: Percent of products shipped ...	2.3	4.4	4.8	6.7	6.5	8.3	5.6	29.6
1 percent to 24 percent.....	2.7	5.0	5.5	7.8	9.1	9.6	6.5	35.3
25 percent to 74 percent.....	7.2	13.3	12.2	15.8	13.4	8.6	15.9	59.6
75 percent or more.....	9.3	16.2	21.2	8.8	9.7	8.7	17.8	59.5
Don't know.....	16.9	26.5	23.1	38.5	8.2	59.4	31.3	-
No.....	1.0	3.0	3.0	5.6	9.1	7.3	2.9	16.7
Don't know.....	6.7	13.6	14.3	8.9	21.9	4.1	11.2	51.0
Not specified.....	21.1	51.2	63.3	13.2	59.2	-	24.8	90.4
Subcontractor to defense agencies:								
Yes: Percent of products shipped ...	1.8	4.0	3.8	6.3	10.2	8.0	5.2	24.2
1 percent to 24 percent.....	2.5	5.0	4.8	7.6	14.8	9.8	6.5	29.5
25 percent to 74 percent.....	5.1	9.3	8.9	14.7	18.2	18.2	11.7	42.1
75 percent or more.....	9.4	17.6	15.3	27.8	15.8	34.3	23.9	73.3
Don't know.....	9.2	16.1	18.2	18.9	22.4	6.5	18.3	-
No.....	2.0	4.2	4.7	7.1	10.6	9.2	3.9	23.7
Don't know.....	2.6	5.2	5.6	8.7	13.5	10.0	4.9	23.8
Not specified.....	17.4	49.0	45.1	58.6	51.4	-	21.4	90.4
Foreign owned:								
Yes.....	4.2	8.9	8.2	7.6	18.7	15.6	9.5	50.1
No.....	0.6	2.4	2.6	5.1	6.6	5.9	2.5	14.5
Don't know.....	6.1	14.3	10.8	10.8	26.8	8.6	14.2	25.0
Not specified.....	14.6	33.5	37.1	33.5	36.0	8.0	19.6	69.9

- Represents zero.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling

Plant characteristic	Relative standard errors for table 4-1							
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	3.6	11.8	17.4	21.6	23.8	3.4	35.0
35, Industrial Machinery and Equipment	0.6	3.2	10.1	12.3	16.3	18.3	3.4	28.5
36, Electronic and Other Electric Equipment	0.8	3.1	8.1	12.2	15.2	10.9	4.0	31.8
37, Transportation Equipment	0.9	3.9	9.7	11.2	13.5	15.5	3.8	31.5
38, Instruments and Related Products	0.7	3.8	9.5	13.8	12.6	13.9	4.4	38.9
Age of plant:								
Less than 5 years	3.6	5.6	13.8	17.2	21.7	19.3	6.2	43.7
5 years to 14 years	2.2	3.9	10.2	14.2	15.8	13.4	4.0	25.2
15 years to 29 years	2.3	3.8	9.2	11.1	15.9	14.4	4.3	27.4
30 years or more	2.6	4.0	9.1	11.2	11.9	15.4	5.0	37.5
Not specified	14.2	36.6	-	39.9	-	44.2	15.9	-
Number of employees:								
Less than 20	4.7	8.3	27.7	46.9	41.9	77.6	6.3	34.6
20 to 99	1.1	2.7	9.3	13.6	14.3	14.3	2.7	22.5
100 to 499	1.4	2.4	5.5	7.8	9.5	8.7	3.6	22.6
500 to 999	2.0	2.6	4.4	5.1	10.1	10.1	6.6	5.3
1,000 or more	1.5	2.3	1.3	3.0	7.0	1.9	9.9	4.7
Not specified	16.4	29.0	45.4	58.8	-	55.2	21.6	-
Unionized plants:								
Yes	2.8	4.1	8.3	12.8	16.9	17.6	5.6	29.4
Contract in effect:								
Yes	2.8	4.1	8.4	12.8	16.9	17.6	5.7	29.4
No	22.0	30.8	48.0	12.8	-	-	37.4	-
Not specified	0.7	2.1	6.1	7.7	9.7	8.4	2.1	17.8
Percentage of products exported:								
None	2.4	5.1	15.7	21.9	26.0	20.7	4.0	30.9
Less than 10 percent	1.6	2.8	7.9	9.6	13.1	12.8	3.2	17.7
10 percent to 19 percent	3.1	4.6	9.6	12.7	17.1	16.9	6.2	39.1
20 percent to 49 percent	3.6	5.5	10.1	12.6	19.0	14.7	7.7	33.0
50 percent or more	7.1	11.0	20.1	26.9	29.5	21.5	13.6	94.3
Not specified	12.5	20.4	35.2	39.7	75.4	52.7	17.8	24.6
Value of goods and services:								
Less than \$750,000	7.4	13.6	44.2	65.7	44.2	62.5	9.5	57.4
\$750,000 to less than \$1 million	7.8	13.5	44.3	76.2	46.9	47.7	10.7	54.1
\$1 million to less than \$5 million	1.7	3.6	12.3	17.7	18.7	18.0	3.3	26.4
\$5 million to less than \$10 million	3.1	4.9	13.0	19.3	23.3	23.0	5.5	45.1
\$10 million to less than \$25 million	2.5	3.7	8.7	12.5	18.9	13.6	5.0	30.9
\$25 million to less than \$50 million	3.1	4.3	8.9	12.3	14.0	15.6	8.0	27.4
\$50 million to less than \$100 million	3.0	4.5	6.9	11.7	11.7	11.2	7.2	34.8
\$100 million or more	1.9	3.4	3.3	4.0	7.7	2.7	8.0	4.8
Not specified	11.9	20.8	31.3	43.4	43.5	54.1	15.4	17.0
Products made to military specifications:								
Yes	1.8	3.1	8.4	10.0	12.4	11.8	3.9	23.4
No	1.4	2.7	6.8	9.0	13.1	10.3	2.8	20.7
Don't know	5.2	8.3	19.7	34.1	22.4	29.1	8.3	51.4
Not specified	17.9	42.9	-	45.4	-	66.2	21.6	-
Prime contractor to defense agencies:								
Yes: Percent of products shipped	2.3	3.7	8.7	10.2	13.2	12.3	4.8	20.8
1 percent to 24 percent	2.7	4.1	10.2	12.5	15.5	15.5	5.5	24.3
25 percent to 74 percent	7.2	11.3	17.9	23.6	43.2	30.5	13.4	46.6
75 percent or more	9.3	15.5	15.2	13.5	35.8	23.6	19.3	43.8
Don't know	16.9	19.2	8.6	50.8	46.8	45.9	29.3	-
No	1.0	2.3	6.6	9.1	11.7	9.8	2.4	20.2
Don't know	6.7	10.6	20.2	24.2	25.4	29.6	11.2	57.1
Not specified	21.1	45.9	-	67.5	-	84.7	24.2	-

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-1—Continued							
	A	B	C	D	E	F	G	H
Subcontractor to defense agencies:								
Yes: Percent of products shipped . . .	1.8	3.1	8.4	10.1	13.8	11.8	3.9	19.2
1 percent to 24 percent	2.5	4.0	10.2	12.5	18.1	14.1	4.9	23.6
25 percent to 74 percent	5.1	7.4	17.6	19.6	23.4	27.2	9.9	38.0
75 percent or more	9.4	13.9	32.7	22.2	55.4	26.9	17.7	57.5
Don't know	9.2	12.2	24.4	57.3	50.5	31.0	16.1	51.2
No	2.0	3.5	9.2	11.3	13.6	11.6	3.5	24.7
Don't know	2.6	4.1	8.7	14.0	14.0	15.9	4.6	35.7
Not specified	17.4	41.7	-	63.2	-	66.2	20.2	-
Foreign owned:								
Yes	4.2	6.1	12.4	14.4	23.5	24.7	8.6	48.2
No	0.6	1.9	5.9	7.7	9.4	8.5	2.0	17.1
Don't know	6.1	9.2	14.5	22.7	26.4	18.0	13.1	60.3
Not specified	14.6	27.3	27.8	48.5	82.8	40.2	19.5	-
Relative standard errors for table 4-2								
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	3.4	14.1	32.0	9.2	14.6	3.1	24.7
35, Industrial Machinery and Equipment	0.6	3.0	10.8	8.7	7.7	9.4	3.1	29.0
36, Electronic and Other Electric Equipment	0.8	2.6	8.8	8.0	27.9	18.5	3.8	28.4
37, Transportation Equipment	0.9	3.5	8.6	4.1	34.6	4.4	3.5	31.4
38, Instruments and Related Products	0.7	3.3	8.6	12.9	6.0	7.9	4.1	29.9
Age of plant:								
Less than 5 years	3.6	5.2	13.3	25.8	20.7	18.0	5.9	33.3
5 years to 14 years	2.2	3.5	10.4	9.0	38.1	19.9	3.8	24.0
15 years to 29 years	2.3	3.5	9.9	15.5	17.7	13.7	4.0	27.5
30 years or more	2.6	3.8	5.4	9.8	16.9	3.6	4.7	28.0
Not specified	14.2	33.1	25.6	17.0	17.0	-	16.0	63.7
Number of employees:								
Less than 20	4.7	8.2	53.2	-	-	-	6.1	38.9
20 to 99	1.1	2.5	13.9	47.6	-	-	2.5	19.2
100 to 499	1.4	2.1	5.9	17.6	10.9	33.8	3.4	20.8
500 to 999	2.0	2.5	4.3	5.0	33.2	10.2	6.2	13.8
1,000 or more	1.5	3.1	1.8	2.9	3.2	2.7	7.9	7.4
Not specified	16.4	29.8	23.1	-	-	-	20.3	76.0
Unionized plants:								
Yes	2.8	3.9	7.3	11.7	15.4	8.3	5.3	27.1
Contract in effect:								
Yes	2.8	4.0	7.4	11.9	15.4	8.3	5.4	27.1
No	22.0	29.7	31.2	8.7	-	-	34.5	-
No	0.7	1.9	6.3	9.0	19.8	9.4	2.0	15.6
Not specified	22.7	36.3	55.4	-	-	26.7	32.1	76.0
Percentage of products exported:								
None	2.4	4.9	17.3	40.2	10.4	7.9	3.8	22.3
Less than 10 percent	1.6	2.6	8.0	10.0	19.6	4.6	3.0	18.4
10 percent to 19 percent	3.1	4.2	10.3	18.0	32.6	17.3	5.8	39.9
20 percent to 49 percent	3.6	4.8	11.0	10.3	15.7	10.3	7.0	55.8
50 percent or more	7.1	9.5	16.4	14.5	12.8	26.8	14.8	51.6
Not specified	12.5	18.5	46.3	13.2	-	20.1	18.4	74.1

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-2—Continued								
	A	B	C	D	E	F	G	H	
Value of goods and services:									
Less than \$750,000	7.4	12.4	82.1	-	-	-	9.4	67.1	
\$750,000 to less than \$1 million	7.8	12.4	60.7	-	-	-	10.8	39.5	
\$1 million to less than \$5 million	1.7	3.3	18.7	73.1	-	-	3.1	23.3	
\$5 million to less than \$10 million ...	3.1	4.5	20.1	60.4	-	15.1	5.2	35.1	
\$10 million to less than \$25 million ..	2.5	3.3	12.1	46.3	69.0	-	4.7	24.5	
\$25 million to less than \$50 million ..	3.1	3.8	9.0	19.9	10.3	61.8	7.7	25.1	
\$50 million to less than \$100 million ..	3.0	4.2	6.9	10.3	36.7	30.1	6.9	34.2	
\$100 million or more	1.9	3.4	3.2	2.9	15.2	2.9	7.1	7.3	
Not specified	11.9	19.9	10.6	41.1	17.0	45.4	15.1	61.5	
Products made to military specifications:									
Yes	1.8	2.9	7.5	9.8	15.8	3.6	3.6	25.3	
No	1.4	2.5	7.5	9.6	21.0	12.5	2.7	17.3	
Don't know	5.2	7.8	18.9	46.7	6.6	7.3	7.8	50.0	
Not specified	17.9	35.3	18.2	-	-	-	21.5	76.0	
Prime contractor to defense agencies:									
Yes: Percent of products shipped ...	2.3	3.3	8.3	6.3	17.7	9.3	4.5	22.5	
1 percent to 24 percent	2.7	3.8	10.5	9.6	32.5	15.3	5.1	31.0	
25 percent to 74 percent	7.2	10.1	18.8	6.1	9.2	14.8	12.8	42.1	
75 percent or more	9.3	14.2	12.0	12.7	13.7	7.7	19.5	48.7	
Don't know	16.9	20.9	31.3	7.6	12.0	12.8	27.9	-	
No	1.0	2.2	7.0	13.1	20.4	8.7	2.2	16.5	
Don't know	6.7	10.1	14.3	6.6	6.3	8.8	10.3	77.5	
Not specified	21.1	41.6	13.2	-	-	-	25.1	76.0	
Subcontractor to defense agencies:									
Yes: Percent of products shipped ...	1.8	2.9	8.2	10.8	12.9	8.4	3.6	27.6	
1 percent to 24 percent	2.5	3.6	11.1	14.6	17.7	11.1	4.6	35.2	
25 percent to 74 percent	5.1	7.0	15.1	12.2	9.2	7.2	9.2	41.9	
75 percent or more	9.4	13.2	27.4	26.1	-	19.8	16.4	13.9	
Don't know	9.2	12.0	25.1	8.7	12.6	30.1	15.4	87.0	
No	2.0	3.2	9.0	13.3	29.2	3.6	3.4	20.0	
Don't know	2.6	3.9	7.8	15.2	4.5	22.3	4.3	28.1	
Not specified	17.4	33.8	9.1	9.1	-	-	21.5	49.5	
Foreign owned:									
Yes	4.2	5.7	13.0	11.9	48.4	8.6	8.1	39.3	
No	0.6	1.8	6.1	9.4	11.1	8.2	1.8	14.6	
Don't know	6.1	8.5	11.0	7.4	6.1	8.6	12.2	9.2	
Not specified	14.6	24.6	17.4	52.0	-	12.5	19.7	76.0	
Relative standard errors for table 4-3									
	A	B	C	D	E	F	G	H	I
Major Group:									
34, Fabricated Metal Products	0.7	4.5	11.4	20.1	20.5	15.1	79.0	2.7	21.6
35, Industrial Machinery and Equipment	0.6	4.3	8.7	11.8	30.1	63.7	96.9	2.4	19.0
36, Electronic and Other Electric Equipment	0.8	3.9	7.4	10.5	28.2	58.4	67.6	2.9	20.6
37, Transportation Equipment	0.9	5.2	9.1	11.0	14.7	66.5	6.2	2.9	24.7
38, Instruments and Related Products	0.7	5.2	8.2	10.3	25.8	56.3	40.2	3.1	23.6
Age of plant:									
Less than 5 years	3.6	6.3	13.8	19.0	43.7	-	12.5	5.2	26.5
5 years to 14 years	2.2	4.6	9.3	14.8	28.4	75.4	52.0	3.3	20.2
15 years to 29 years	2.3	4.6	7.9	10.3	15.6	56.6	32.5	3.5	20.0
30 years or more	2.6	5.3	6.0	9.4	18.6	35.7	62.2	3.9	19.8
Not specified	14.2	37.4	60.8	85.2	-	-	-	16.0	88.3

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-3—Continued								
	A	B	C	D	E	F	G	H	I
Number of employees:									
Less than 20	4.7	10.2	26.1	88.3	-	97.5	-	5.7	29.1
20 to 99	1.1	3.3	9.7	18.0	37.5	90.4	48.3	2.1	15.1
100 to 499	1.4	3.2	4.8	7.8	23.2	37.8	46.1	2.5	16.0
500 to 999	2.0	3.7	4.5	4.8	12.0	37.0	6.6	3.9	9.6
1,000 or more	1.5	6.0	1.3	1.3	1.9	4.2	8.8	4.5	30.2
Not specified	16.4	42.6	48.5	76.3	-	-	-	18.8	-
Unionized plants:									
Yes	2.8	5.8	7.5	9.6	16.8	5.3	70.1	4.3	19.1
Contract in effect:									
Yes	2.8	5.9	7.6	9.7	16.9	5.3	70.1	4.3	19.5
No	22.0	35.9	58.2	6.3	12.8	-	-	31.2	86.7
No	0.7	2.6	5.5	7.8	16.2	48.3	44.6	1.6	11.8
Not specified	22.7	39.8	54.3	45.4	20.1	-	-	29.7	26.7
Percentage of products exported:									
None	2.4	6.0	16.3	23.3	29.7	78.0	64.2	3.5	21.0
Less than 10 percent	1.6	3.5	6.3	7.6	20.0	53.8	63.0	2.5	13.3
10 percent to 19 percent	3.1	5.4	9.1	11.8	23.3	60.6	54.6	4.9	24.0
20 percent to 49 percent	3.6	6.9	8.5	12.8	23.5	3.9	66.3	5.4	38.9
50 percent or more	7.1	12.1	18.3	21.1	29.8	-	17.5	11.0	65.2
Not specified	12.5	27.8	32.4	11.9	13.2	-	-	15.4	95.2
Value of goods and services:									
Less than \$750,000	7.4	15.3	35.0	-	9.2	-	-	9.0	41.2
\$750,000 to less than \$1 million	7.8	14.8	38.3	72.5	91.7	-	96.0	10.3	31.8
\$1 million to less than \$5 million	1.7	4.2	13.5	23.1	49.5	80.5	82.6	2.7	19.8
\$5 million to less than \$10 million	3.1	6.0	13.1	21.8	50.4	-	80.4	4.4	23.9
\$10 million to less than \$25 million	2.5	4.5	8.8	17.4	32.0	49.6	60.0	3.8	20.0
\$25 million to less than \$50 million	3.1	5.4	7.3	11.9	32.4	81.2	67.4	5.6	23.0
\$50 million to less than \$100 million	3.0	6.2	6.6	7.3	20.6	44.0	9.2	5.1	16.8
\$100 million or more	1.9	6.0	3.1	3.2	1.8	4.4	7.3	4.5	21.5
Not specified	11.9	29.2	28.5	41.2	25.8	-	12.5	14.0	45.6
Products made to military specifications:									
Yes	1.8	3.8	6.2	9.7	18.1	55.0	50.9	3.1	19.6
No	1.4	3.4	6.8	7.4	14.9	48.8	57.3	2.3	14.2
Don't know	5.2	10.4	16.6	36.3	43.6	-	12.5	6.9	25.4
Not specified	17.9	41.8	59.3	9.2	-	-	-	20.7	-
Prime contractor to defense agencies:									
Yes: Percent of products shipped	2.3	4.4	7.1	8.4	19.1	57.7	51.5	3.7	20.6
1 percent to 24 percent	2.7	4.9	8.3	10.8	26.7	76.4	61.1	4.3	28.9
25 percent to 74 percent	7.2	14.1	19.8	19.9	10.2	43.6	75.8	10.8	29.3
75 percent or more	9.3	15.5	24.5	15.2	33.6	-	10.0	16.3	52.5
Don't know	16.9	24.1	32.1	54.4	10.3	-	-	23.5	-
No	1.0	3.0	6.0	8.0	14.4	42.1	52.9	1.9	12.9
Don't know	6.7	11.8	15.4	40.7	37.8	-	12.5	9.5	34.6
Not specified	21.1	46.8	84.7	-	-	-	-	24.2	-
Subcontractor to defense agencies:									
Yes: Percent of products shipped	1.8	3.7	6.7	9.8	20.0	56.3	53.3	3.1	19.5
1 percent to 24 percent	2.5	4.6	8.8	10.9	26.7	44.4	56.5	4.0	26.0
25 percent to 74 percent	5.1	8.8	13.5	17.7	35.7	77.8	9.2	7.8	35.3
75 percent or more	9.4	16.2	17.3	41.5	9.9	56.4	15.1	14.3	58.8
Don't know	9.2	16.5	22.2	35.2	26.5	-	-	12.4	80.7
No	2.0	4.3	7.9	10.8	18.1	66.8	63.0	2.9	17.4
Don't know	2.6	5.2	9.6	10.1	21.7	57.5	58.7	3.7	17.8
Not specified	17.4	57.0	42.7	-	9.1	-	-	19.1	-

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-3—Continued								
	A	B	C	D	E	F	G	H	I
Foreign owned:									
Yes.....	4.2	7.8	11.7	13.4	33.2	9.2	7.8	6.5	27.4
No.....	0.6	2.4	5.1	7.3	12.3	44.7	38.7	1.5	11.1
Don't know.....	6.1	11.7	11.3	14.1	30.1	-	-	9.4	49.1
Not specified.....	14.6	36.2	27.3	48.2	9.1	-	-	17.2	-
	Relative standard errors for table 4-4								
	A	B	C	D	E	F	G	H	
Major Group:									
34, Fabricated Metal Products.....	0.7	16.9	13.2	8.6	6.6	53.6	2.3	27.6	
35, Industrial Machinery and Equipment.....	0.6	15.3	12.2	8.3	5.4	38.7	2.2	30.0	
36, Electronic and Other Electric Equipment.....	0.8	13.0	9.2	6.4	5.1	34.8	2.8	27.1	
37, Transportation Equipment.....	0.9	15.6	9.0	7.8	6.6	80.2	2.6	23.0	
38, Instruments and Related Products.....	0.7	14.9	10.0	7.9	6.1	36.2	3.0	32.4	
Age of plant:									
Less than 5 years.....	3.6	18.4	13.8	10.8	8.5	45.1	4.9	42.6	
5 years to 14 years.....	2.2	12.8	11.2	7.8	6.0	36.0	3.1	25.5	
15 years to 29 years.....	2.3	14.8	10.0	7.0	5.5	28.5	3.3	25.4	
30 years or more.....	2.6	12.9	9.1	8.0	5.8	37.3	3.8	25.5	
Not specified.....	14.2	17.0	57.2	83.5	35.0	-	16.1	62.1	
Number of employees:									
Less than 20.....	4.7	37.6	47.3	27.1	13.0	80.2	5.5	31.6	
20 to 99.....	1.1	13.8	11.1	6.9	4.5	26.3	2.0	20.5	
100 to 499.....	1.4	8.6	5.8	5.1	3.6	33.1	2.6	19.9	
500 to 999.....	2.0	12.5	5.4	3.7	3.0	7.3	4.2	12.0	
1,000 or more.....	1.5	2.2	1.3	3.2	2.1	11.2	5.4	9.7	
Not specified.....	16.4	-	44.2	61.8	52.5	-	19.0	-	
Unionized plants:									
Yes.....	2.8	12.9	9.3	6.6	6.9	35.9	4.1	22.3	
Contract in effect:									
Yes.....	2.8	13.0	9.5	6.7	7.0	39.7	4.2	22.3	
No.....	22.0	35.4	32.5	39.4	36.1	13.3	29.0	-	
No.....	0.7	8.4	6.7	4.8	3.3	21.8	1.5	15.4	
Not specified.....	22.7	20.1	51.3	62.8	56.3	91.5	29.0	26.7	
Percentage of products exported:									
None.....	2.4	25.2	17.9	11.9	8.1	55.3	3.3	24.1	
Less than 10 percent.....	1.6	9.6	8.6	6.1	4.3	27.0	2.4	19.7	
10 percent to 19 percent.....	3.1	15.2	9.5	8.1	6.4	49.0	4.8	39.4	
20 percent to 49 percent.....	3.6	16.0	10.1	9.4	8.0	41.9	5.5	27.7	
50 percent or more.....	7.1	25.3	21.6	14.8	13.8	36.0	11.3	-	
Not specified.....	12.5	66.5	47.3	34.5	26.8	-	15.4	-	
Value of goods and services:									
Less than \$750,000.....	7.4	48.8	38.3	37.2	20.6	-	8.6	41.4	
\$750,000 to less than \$1 million.....	7.8	58.8	51.9	42.7	19.8	91.7	9.3	41.5	
\$1 million to less than \$5 million.....	1.7	16.8	15.5	9.0	5.6	34.4	2.5	27.4	
\$5 million to less than \$10 million.....	3.1	20.5	14.0	10.5	7.6	43.4	4.3	31.7	
\$10 million to less than \$25 million.....	2.5	12.1	11.3	7.6	5.5	43.3	3.7	24.4	
\$25 million to less than \$50 million.....	3.1	16.2	9.8	7.0	6.2	60.0	5.6	23.4	
\$50 million to less than \$100 million.....	3.0	11.2	8.5	7.0	6.2	43.0	5.1	16.9	
\$100 million or more.....	1.9	8.8	2.2	2.7	4.4	6.7	5.1	10.0	
Not specified.....	11.9	71.8	32.5	40.4	24.6	-	14.4	72.2	
Products made to military specifications:									
Yes.....	1.8	11.7	8.6	6.2	4.8	27.7	2.9	21.5	
No.....	1.4	9.8	7.7	5.8	4.2	26.0	2.2	18.0	
Don't know.....	5.2	23.1	23.4	13.2	12.4	94.1	6.9	46.4	
Not specified.....	17.9	-	51.4	62.9	48.1	-	20.4	-	

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-4—Continued										
	A	B	C	D	E	F	G	H			
Prime contractor to defense agencies:											
Yes: Percent of products shipped . . .	2.3	11.9	9.3	6.6	5.4	33.0	3.6	18.7			
1 percent to 24 percent	2.7	14.3	10.8	7.9	6.0	42.5	4.2	22.5			
25 percent to 74 percent	7.2	20.1	22.2	14.5	16.7	79.3	10.5	43.3			
75 percent or more	9.3	26.3	33.5	19.1	11.2	60.7	15.0	58.8			
Don't know	16.9	66.3	40.0	29.7	28.3	62.4	24.0	54.1			
No	1.0	9.3	7.4	5.3	3.8	25.4	1.7	17.6			
Don't know	6.7	19.6	18.8	15.4	14.4	58.4	9.3	46.5			
Not specified	21.1	-	59.2	69.3	49.3	-	24.7	-			
Subcontractor to defense agencies:											
Yes: Percent of products shipped . . .	1.8	11.5	9.2	6.4	4.6	29.3	2.9	17.2			
1 percent to 24 percent	2.5	13.6	11.5	7.9	5.7	31.5	3.7	21.9			
25 percent to 74 percent	5.1	25.3	16.1	13.3	11.0	62.2	7.6	42.3			
75 percent or more	9.4	43.2	32.3	31.6	18.9	89.4	13.2	49.2			
Don't know	9.2	36.8	53.3	26.2	16.6	9.2	12.6	46.9			
No	2.0	12.7	9.6	6.9	5.5	38.0	2.8	21.3			
Don't know	2.6	12.9	9.8	7.7	6.5	37.7	3.6	27.4			
Not specified	17.4	13.2	52.1	84.6	48.8	-	20.1	-			
Foreign owned:											
Yes	4.2	18.6	15.6	9.8	8.7	59.5	6.5	28.3			
No	0.6	8.3	6.3	4.5	3.2	21.6	1.4	14.5			
Don't know	6.1	18.7	15.4	13.7	13.1	60.8	9.8	24.8			
Not specified	14.6	30.6	40.7	48.7	33.2	-	18.7	17.0			
	Relative standard errors for table 4-5										
	A	B	C	D	E	F	G	H	I	J	K
Major Group:											
34, Fabricated Metal Products	0.7	4.4	11.2	29.2	25.4	51.6	-	74.1	92.5	2.5	21.6
35, Industrial Machinery and Equipment	0.6	4.2	11.2	17.4	20.7	5.1	12.2	15.8	12.5	2.3	19.6
36, Electronic and Other Electric Equipment	0.8	3.6	8.7	15.8	24.8	36.3	7.4	23.4	10.4	2.8	26.4
37, Transportation Equipment	0.9	4.6	9.1	8.6	16.1	13.3	14.8	11.5	8.3	2.8	23.2
38, Instruments and Related Products	0.7	4.5	10.0	17.2	14.2	4.0	46.2	54.5	6.5	3.1	22.6
Age of plant:											
Less than 5 years	3.6	6.2	14.7	26.0	30.2	92.4	26.2	52.3	92.5	5.1	26.8
5 years to 14 years	2.2	4.5	9.0	15.0	27.8	45.3	9.0	34.9	24.8	3.2	19.6
15 years to 29 years	2.3	4.4	8.9	20.1	21.4	15.1	46.1	9.3	9.6	3.4	19.1
30 years or more	2.6	4.5	6.9	13.0	9.2	3.8	7.0	23.3	5.7	4.0	23.8
Not specified	14.2	36.8	67.7	17.0	-	-	-	-	17.0	16.3	66.0
Number of employees:											
Less than 20	4.7	10.8	42.4	88.0	-	-	-	-	92.5	5.6	25.9
20 to 99	1.1	3.3	11.3	27.0	48.2	92.4	-	-	-	2.0	15.7
100 to 499	1.4	2.7	5.9	12.4	20.1	14.3	84.7	50.0	-	2.6	15.0
500 to 999	2.0	2.8	3.4	5.7	13.2	32.0	26.2	66.0	-	4.4	4.6
1,000 or more	1.5	2.6	3.2	1.6	4.5	3.4	4.7	7.0	5.2	5.6	7.0
Not specified	16.4	38.6	46.9	95.2	-	-	-	-	-	19.2	92.5
Unionized plants:											
Yes	2.8	4.7	8.0	15.0	10.0	3.7	31.3	20.5	5.2	4.3	27.7
Contract in effect:											
Yes	2.8	4.8	8.1	15.0	10.2	3.9	31.3	20.5	5.2	4.4	27.9
No	22.0	26.5	46.1	-	58.4	10.9	-	-	-	29.9	9.2
No	0.7	2.5	5.7	12.3	16.2	23.7	5.1	31.1	53.9	1.6	12.1
Not specified	22.7	39.6	50.4	-	-	12.5	-	-	-	30.8	26.7

See footnote at end of table.

Plant characteristic	Relative standard errors for table 4-5—Continued										
	A	B	C	D	E	F	G	H	I	J	K
Percentage of products exported:											
None	2.4	6.1	15.3	33.8	28.6	11.7	19.1	19.4	11.2	3.4	20.6
Less than 10 percent	1.6	3.3	7.3	16.3	20.5	5.0	14.6	19.7	81.2	2.5	16.1
10 percent to 19 percent	3.1	4.9	10.7	20.7	24.7	40.7	7.0	39.2	7.3	4.9	26.5
20 percent to 49 percent	3.6	5.9	10.7	13.2	14.4	28.1	39.9	-	10.3	5.8	24.6
50 percent or more	7.1	10.7	18.7	27.2	27.1	10.5	12.1	10.0	-	11.6	-
Not specified	12.5	21.9	34.4	-	71.9	-	-	20.1	-	16.6	56.8
Value of goods and services:											
Less than \$750,000	7.4	14.7	89.6	83.6	-	-	-	-	-	9.0	37.9
\$750,000 to less than \$1 million	7.8	16.4	47.5	12.6	-	-	-	-	-	9.6	36.5
\$1 million to less than \$5 million	1.7	4.4	14.1	42.5	73.6	-	-	-	92.5	2.6	18.9
\$5 million to less than \$10 million ...	3.1	5.8	15.1	31.8	50.8	92.4	-	-	-	4.3	28.1
\$10 million to less than \$25 million ..	2.5	4.3	9.8	22.9	35.2	53.2	-	84.7	-	3.7	21.5
\$25 million to less than \$50 million ..	3.1	4.6	9.0	16.0	25.2	8.5	-	50.0	-	5.9	22.9
\$50 million to less than \$100 million ..	3.0	4.9	7.5	13.2	17.6	42.8	24.8	-	-	5.3	4.6
\$100 million or more	1.9	3.8	2.5	1.9	4.7	14.8	16.5	6.6	5.2	5.2	6.7
Not specified	11.9	25.5	39.7	12.0	-	20.1	45.4	-	-	14.4	65.3
Products made to military specifications:											
Yes	1.8	3.7	6.7	15.5	15.3	18.4	19.6	18.6	6.4	2.9	19.9
No	1.4	3.2	7.3	11.1	14.5	29.9	12.3	52.0	49.9	2.2	13.3
Don't know	5.2	9.4	18.1	32.8	16.6	10.8	-	8.8	12.5	6.9	61.2
Not specified	17.9	38.7	47.6	-	-	-	-	-	-	20.8	-
Prime contractor to defense agencies:											
Yes: Percent of products shipped ...	2.3	4.1	7.6	16.8	17.6	9.6	22.4	23.4	6.4	3.7	21.6
1 percent to 24 percent	2.7	4.6	9.4	22.6	22.6	17.7	35.3	50.9	10.0	4.2	27.1
25 percent to 74 percent	7.2	13.1	14.3	22.6	4.7	7.5	-	-	17.5	10.6	35.8
75 percent or more	9.3	17.1	20.6	21.1	23.9	9.6	9.4	13.7	9.2	15.6	47.9
Don't know	16.9	20.7	44.9	87.8	10.8	13.8	-	-	12.8	23.8	54.1
No	1.0	2.8	6.5	12.3	13.1	31.5	10.8	31.3	8.4	1.8	13.5
Don't know	6.7	11.8	15.6	30.3	17.0	8.1	12.6	12.5	92.5	9.5	46.0
Not specified	21.1	43.2	81.4	-	-	-	-	-	-	24.7	-
Subcontractor to defense agencies:											
Yes: Percent of products shipped ...	1.8	3.6	7.1	15.4	16.8	16.2	4.9	16.7	6.6	2.9	20.2
1 percent to 24 percent	2.5	4.6	9.4	16.5	24.9	23.1	5.1	6.9	11.0	3.8	28.0
25 percent to 74 percent	5.1	8.3	13.7	32.7	29.2	6.2	-	20.1	7.3	7.9	32.0
75 percent or more	9.4	16.1	25.5	63.5	47.3	-	-	74.1	-	13.4	46.6
Don't know	9.2	14.7	25.0	31.5	50.1	30.7	17.0	-	-	12.9	65.8
No	2.0	4.1	8.8	15.1	18.2	41.3	20.6	44.3	9.8	2.9	15.8
Don't know	2.6	4.8	9.8	15.3	13.1	8.2	39.4	19.6	72.0	3.7	22.6
Not specified	17.4	37.2	63.2	-	13.2						

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-6—Continued									
	A	B	C	D	E	F	G	H	I	J
Age of plant:										
Less than 5 years	12.9	17.2	25.1	20.1	19.3	21.7	39.4	17.8	24.3	34.8
5 years to 14 years	8.3	13.8	18.4	13.3	15.6	23.7	27.3	11.1	18.3	22.9
15 years to 29 years	8.0	12.1	12.8	14.5	18.3	13.4	22.1	9.3	17.6	24.8
30 years or more	7.5	12.7	13.0	11.1	13.2	16.9	16.0	8.8	17.1	14.7
Not specified	51.4	64.2	56.7	65.8	-	-	-	74.4	94.3	59.7
Number of employees:										
Less than 20	20.8	36.8	47.0	36.3	36.6	56.8	44.3	30.1	64.3	58.7
20 to 99	7.3	11.8	14.7	14.9	15.0	21.3	21.9	9.0	16.0	22.2
100 to 499	5.1	7.5	10.2	9.6	10.4	11.1	14.8	5.7	11.7	12.2
500 to 999	4.6	7.1	8.9	5.2	7.7	11.7	26.5	4.7	6.1	3.8
1,000 or more	3.2	2.1	2.3	1.6	6.4	3.3	13.7	4.8	5.3	2.5
Not specified	53.0	56.8	61.1	45.4	-	70.4	-	41.7	-	84.7
Unionized plants:										
Yes	6.5	10.1	11.0	12.7	11.3	10.5	16.0	7.0	19.8	20.4
Contract in effect:										
Yes	6.6	10.2	11.1	10.6	11.4	10.5	16.0	7.1	19.8	20.7
No	34.2	63.6	12.6	81.2	74.0	-	-	37.6	-	9.1
No	5.1	8.0	9.9	8.8	10.3	12.6	15.2	6.5	11.0	15.0
Not specified	80.4	52.9	84.7	18.5	10.3	-	-	54.3	-	84.7
Percentage of products exported:										
None	12.5	18.1	23.3	24.9	21.7	31.8	37.6	14.4	30.0	32.0
Less than 10 percent	6.0	10.0	12.1	11.6	12.8	14.4	17.1	6.9	12.8	17.2
10 percent to 19 percent	8.9	17.0	18.1	13.5	14.8	14.6	21.5	10.6	18.3	18.6
20 percent to 49 percent	10.5	17.3	20.1	13.2	16.4	15.3	25.6	11.3	18.6	23.3
50 percent or more	15.3	18.7	22.0	22.2	26.1	27.0	43.9	21.8	26.2	30.9
Not specified	39.9	52.1	84.7	13.2	31.0	47.7	71.6	48.1	13.2	84.7
Value of goods and services:										
Less than \$750,000	28.7	42.5	70.5	87.5	45.2	48.7	97.5	49.1	56.1	-
\$750,000 to less than \$1 million	26.6	41.0	44.8	43.6	69.2	87.0	67.0	37.7	67.0	57.7
\$1 million to less than \$5 million	9.1	14.2	22.5	21.0	19.3	24.0	25.6	11.3	22.0	33.1
\$5 million to less than \$10 million	11.3	20.5	18.7	18.5	21.7	31.3	27.2	13.1	24.3	35.3
\$10 million to less than \$25 million	7.9	10.8	15.2	14.1	15.2	17.4	19.4	10.1	18.1	21.1
\$25 million to less than \$50 million	7.3	13.0	16.1	13.6	15.4	15.9	21.3	8.7	19.6	20.8
\$50 million to less than \$100 million	6.6	11.6	14.2	11.6	14.5	14.6	24.3	7.7	12.8	11.4
\$100 million or more	4.0	6.0	4.6	2.7	5.2	7.1	20.3	4.6	7.8	6.3
Not specified	16.7	66.2	84.7	29.5	18.5	8.2	-	27.8	26.2	66.2
Products made to military specifications:										
Yes	6.3	10.3	12.6	10.3	12.4	15.8	19.3	8.1	15.1	18.8
No	6.2	10.0	12.3	10.8	11.0	11.1	15.6	7.5	12.8	17.2
Don't know	17.6	22.3	21.5	29.9	27.4	22.1	39.9	19.3	42.7	34.2
Not specified	63.8	54.5	84.7	-	13.3	-	-	57.8	-	62.9
Prime contractor to defense agencies:										
Yes: Percent of products shipped	6.9	11.1	15.0	11.4	12.7	16.0	15.3	7.8	17.0	18.9
1 percent to 24 percent	7.9	13.4	18.3	13.7	16.0	19.6	20.1	9.3	19.4	21.0
25 percent to 74 percent	18.9	26.0	23.6	23.3	24.6	33.2	21.6	21.0	39.9	33.2
75 percent or more	18.9	18.1	9.0	33.2	15.7	27.0	23.0	14.2	57.6	9.2
Don't know	34.4	62.2	52.6	8.0	12.0	66.3	90.4	44.2	-	10.8
No	5.6	9.0	10.2	9.8	11.3	12.9	15.3	6.9	11.8	16.2
Don't know	23.4	32.0	19.3	27.6	30.7	15.2	59.7	19.7	55.5	36.9
Not specified	68.9	84.7	84.7	-	-	-	-	51.2	68.9	84.7

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-6—Continued											
	A	B	C	D	E	F	G	H	I	J		
Subcontractor to defense agencies:												
Yes: Percent of products shipped . . .	6.3	9.8	12.7	10.4	12.5	16.4	17.3	8.0	14.6	18.4		
1 percent to 24 percent	7.5	12.0	14.9	12.6	14.9	16.6	19.4	9.1	17.6	23.7		
25 percent to 74 percent	14.9	22.4	26.2	17.2	22.9	33.5	39.7	19.0	30.3	37.9		
75 percent or more	25.5	29.7	54.6	45.2	41.8	61.3	35.2	31.1	32.2	43.3		
Don't know	22.1	37.0	54.4	6.8	31.1	31.6	52.1	29.3	39.8	34.5		
No	7.4	13.1	15.3	13.5	12.8	13.2	25.6	8.8	16.2	17.4		
Don't know	9.3	13.9	14.5	14.6	17.7	13.8	21.7	11.7	18.8	30.6		
Not specified	96.9	84.7	84.7	91.7	13.2	-	-	74.4	91.7	84.7		
Foreign owned:												
Yes	11.3	16.9	20.5	17.0	18.6	17.8	26.1	10.4	20.4	20.6		
No	4.7	7.6	9.4	8.2	9.5	11.9	13.8	6.1	10.8	13.8		
Don't know	14.2	20.3	18.6	20.7	16.3	17.8	31.0	18.4	27.7	4.9		
Not specified	57.8	64.2	63.0	83.0	37.9	82.6	-	44.2	71.4	84.7		
	Relative standard errors for table 4-7											
	A	B	C	D	E	F	G	H	I	J	K	L
Major Group:												
34, Fabricated Metal Products	5.1	7.9	10.3	11.5	7.6	22.0	14.6	16.2	15.5	24.7	24.3	15.0
35, Industrial Machinery and Equipment	4.9	7.6	10.3	11.8	6.4	19.3	17.4	11.8	16.5	22.2	26.0	14.2
36, Electronic and Other Electric Equipment	4.2	6.8	8.1	11.9	6.4	29.3	14.1	11.8	14.6	25.7	22.5	13.9
37, Transportation Equipment	4.7	7.7	10.7	12.9	6.8	23.9	19.3	11.7	16.2	17.1	23.0	11.8
38, Instruments and Related Products	5.2	7.5	11.0	15.2	7.4	27.1	21.9	12.0	16.6	27.4	32.9	15.8
Age of plant:												
Less than 5 years	7.5	11.3	13.8	21.9	9.7	58.9	28.8	14.4	23.6	25.8	34.2	21.2
5 years to 14 years	5.1	7.3	10.0	11.3	7.1	34.3	15.9	13.6	15.6	21.7	21.9	15.1
15 years to 29 years	4.7	7.0	9.1	10.4	6.2	22.8	11.9	10.4	13.2	18.8	21.8	14.1
30 years or more	4.6	6.5	9.0	10.6	6.7	14.3	13.9	12.3	15.3	28.2	25.2	11.7
Not specified	40.1	46.4	70.3	-	59.0	-	17.0	53.3	17.0	-	85.4	-
Number of employees:												
Less than 20	11.0	14.8	20.1	23.5	16.3	77.0	43.0	32.0	35.1	46.5	47.0	23.3
20 to 99	3.9	5.8	7.4	9.4	5.8	26.8	13.4	11.8	13.6	17.2	19.6	11.5
100 to 499	2.9	4.8	6.2	7.3	4.0	13.6	9.5	6.7	9.4	14.2	15.5	9.5
500 to 999	3.4	5.1	7.2	3.1	3.3	3.6	12.3	5.0	6.7	28.4	13.4	8.4
1,000 or more	2.5	1.5	2.1	2.5	4.3	14.8	4.5	4.4	4.1	3.6	3.9	6.9
Not specified	38.9	54.8	84.7	-	62.4	-	86.7	48.4	95.2	-	-	61.9
Unionized plants:												
Yes	4.7	6.8	10.1	10.2	6.6	11.7	12.8	11.0	14.5	23.7	26.8	13.2
Contract in effect:												
Yes	4.8	6.9	9.6	10.4	6.6	12.0	12.9	11.2	14.0	23.8	26.8	12.5
No	37.6	20.2	63.5	42.4	34.1	42.1	82.3	40.6	71.1	14.7	-	67.1
No	2.9	4.3	5.7	7.2	4.2	86.3	9.7	7.7	9.7	14.4	14.0	8.5
Not specified	41.1	55.7	84.7	91.5	48.0	-	-	62.4	-	93.1	-	-
Percentage of products exported:												
None	6.9	10.0	13.1	14.7	9.6	42.0	23.9	19.9	19.4	24.0	30.4	16.1
Less than 10 percent	3.4	5.2	6.5	8.1	4.9	16.7	9.7	8.7	11.4	17.1	15.8	10.0
10 percent to 19 percent	5.6	8.9	11.6	13.4	7.1	19.3	20.1	10.7	15.6	20.2	27.6	17.2
20 percent to 49 percent	6.9	8.1	12.8	18.6	9.0	29.1	25.0	17.0	21.8	25.7	29.0	16.0
50 percent or more	12.6	15.9	20.7	46.9	16.0	53.8	33.3	23.7	87.0	10.0	87.8	26.7
Not specified	24.1	34.7	51.5	60.5	47.4	17.8	-	42.1	56.5	95.2	13.2	60.8

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-7—Continued											
	A	B	C	D	E	F	G	H	I	J	K	L
Value of goods and services:												
Less than \$750,000	17.8	23.7	30.3	35.0	22.3	-	93.1	53.6	49.8	54.5	54.8	37.6
\$750,000 to less than \$1 million	17.1	20.0	34.8	37.1	28.3	-	88.3	61.0	56.1	48.6	96.9	61.0
\$1 million to less than \$5 million	5.0	7.2	9.1	11.5	7.3	28.8	17.6	15.1	17.5	20.0	25.8	13.5
\$5 million to less than \$10 million	6.5	9.2	11.7	14.3	9.3	40.2	19.8	18.4	19.9	35.1	25.8	17.7
\$10 million to less than \$25 million ..	4.4	6.6	8.2	10.0	6.1	22.3	12.4	10.4	15.8	21.0	25.4	16.7
\$25 million to less than \$50 million ..	4.9	7.7	9.5	13.3	6.4	20.0	14.6	10.8	15.2	21.8	22.6	14.9
\$50 million to less than \$100 million ..	5.5	7.8	11.6	13.1	6.7	5.6	13.9	13.1	17.8	20.3	22.1	10.2
\$100 million or more	3.1	3.3	3.8	6.7	3.8	11.2	12.8	7.2	7.3	16.3	14.4	6.9
Not specified	24.9	22.4	27.0	47.8	16.7	-	17.0	38.4	10.8	41.3	35.1	39.0
Products made to military specifications:												
Yes	4.0	5.5	8.2	10.0	5.5	16.6	12.6	9.9	12.6	17.5	19.1	10.9
No	3.6	5.5	6.8	8.1	5.0	18.1	10.8	8.8	11.3	19.3	17.8	10.1
Don't know	9.6	13.8	18.3	17.0	13.2	35.6	28.2	22.8	29.4	26.1	39.1	27.1
Not specified	37.7	66.7	60.0	-	59.1	-	95.2	52.2	89.2	-	-	95.2
Prime contractor to defense agencies:												
Yes: Percent of products shipped ...	4.4	5.9	8.3	11.5	6.0	20.2	13.6	9.1	15.5	15.5	21.5	12.5
1 percent to 24 percent	4.9	6.9	9.4	12.8	6.6	23.3	15.7	10.5	17.7	19.5	25.7	14.6
25 percent to 74 percent	13.9	14.5	17.0	28.9	20.3	45.0	35.5	25.8	48.3	28.1	39.2	36.1
75 percent or more	15.8	19.8	37.3	26.0	12.0	11.5	44.1	20.8	30.0	19.6	71.2	34.7
Don't know	21.3	28.5	43.7	13.3	31.0	55.6	41.0	36.1	51.9	76.0	10.8	48.5
No	3.2	4.9	6.5	7.4	4.5	15.4	9.8	8.6	9.7	16.1	15.8	9.4
Don't know	11.1	16.5	21.9	21.9	14.4	36.1	45.4	24.9	23.0	36.7	37.6	27.4
Not specified	50.0	75.2	66.0	-	-	-	-	62.4	-	-	-	-
Subcontractor to defense agencies:												
Yes: Percent of products shipped ...	4.0	5.9	8.1	10.1	5.5	16.1	12.2	9.6	13.8	18.5	19.5	11.0
1 percent to 24 percent	5.0	7.3	10.1	12.1	6.8	17.3	16.0	12.2	18.7	25.9	26.8	13.1
25 percent to 74 percent	9.5	11.8	17.4	23.0	13.2	41.9	24.2	18.8	25.0	29.9	31.4	25.6
75 percent or more	16.8	26.6	32.5	42.5	16.4	33.3	39.2	21.0	38.0	36.7	88.0	40.7
Don't know	15.9	25.8	26.9	44.8	20.2	69.6	41.9	34.9	42.3	77.5	66.2	42.0
No	4.5	6.7	8.3	9.7	6.6	19.8	13.9	11.5	13.7	21.3	21.8	12.0
Don't know	5.0	7.5	10.1	11.4	6.6	22.2	15.1	12.0	14.0	24.6	19.8	14.9
Not specified	43.7	68.8	84.7	-	56.6	-	26.7	62.4	-	-	13.2	12.5
Foreign owned:												
Yes	7.6	11.5	14.8	18.7	9.7	21.8	19.5	16.2	23.9	35.3	26.6	20.0
No	2.7	4.0	5.3	6.5	3.9	14.1	9.0	7.2	8.9	13.5	13.6	8.1
Don't know	8.2	13.1	18.7	23.7	11.4	34.1	23.9	18.9	26.4	21.7	39.9	16.2
Not specified	27.4	36.5	40.6	69.7	34.0	-	39.2	42.0	71.5	-	13.2	17.0
Relative standard errors for table 4-8												
	A	B	C	D	E	F	G	H	I	J		
Major Group:												
34, Fabricated Metal Products	6.8	8.8	9.7	16.1	12.4	9.8	11.9	15.1	22.4	2.0		
35, Industrial Machinery and Equipment	6.2	8.1	8.6	14.9	13.3	7.2	9.0	17.7	20.7	1.7		
36, Electronic and Other Electric Equipment	4.8	6.1	6.5	12.6	11.3	5.7	7.7	17.3	25.8	2.3		
37, Transportation Equipment	5.9	8.0	7.8	15.1	10.3	6.7	9.1	18.9	23.9	2.1		
38, Instruments and Related Products	5.7	7.6	7.7	14.5	16.5	6.5	8.2	21.2	20.4	2.4		
Age of plant:												
Less than 5 years	8.1	9.7	10.9	17.4	16.8	9.9	11.3	21.0	34.2	4.6		
5 years to 14 years	6.3	7.5	8.7	13.9	13.1	7.1	8.6	15.9	23.2	2.9		
15 years to 29 years	5.5	7.1	7.5	13.6	11.1	6.5	8.5	16.0	19.8	3.0		
30 years or more	5.7	7.2	6.4	16.8	10.2	6.2	8.9	18.2	19.5	3.4		
Not specified	50.3	60.8	34.3	84.0	18.3	51.2	67.1	67.2	94.1	15.3		

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-8—Continued									
	A	B	C	D	E	F	G	H	I	J
Number of employees:										
Less than 20	16.4	21.1	27.8	39.5	34.2	23.3	26.0	31.1	45.0	5.2
20 to 99	5.5	6.3	7.7	11.5	12.7	6.9	8.1	12.7	19.4	1.7
100 to 499	3.5	4.9	4.9	8.8	6.6	4.0	5.4	10.4	12.4	2.2
500 to 999	2.9	4.2	3.6	9.7	6.0	3.2	3.8	13.9	9.9	3.5
1,000 or more	1.4	2.1	1.5	2.5	1.6	1.0	2.4	3.6	4.2	4.6
Not specified	37.6	55.6	47.6	12.5	59.9	52.5	66.2	70.5	95.2	18.3
Unionized plants:										
Yes	5.8	7.5	6.4	13.8	10.9	5.6	8.3	20.1	19.7	3.8
Contract in effect:										
Yes	5.9	7.6	6.5	13.9	11.1	5.6	8.4	20.3	19.8	3.8
No	33.6	45.9	45.4	79.1	49.7	34.2	37.2	11.2	14.4	26.4
No	3.5	4.4	4.9	9.2	7.5	4.3	5.2	9.7	14.1	1.3
Not specified	44.6	69.4	47.1	91.5	13.2	60.2	46.0	70.5	-	28.7
Percentage of products exported:										
None	9.3	10.9	13.8	20.0	16.8	12.7	15.0	20.3	26.9	3.0
Less than 10 percent	4.5	5.8	6.2	11.7	8.7	5.2	6.6	12.4	16.9	2.2
10 percent to 19 percent	6.1	8.1	8.6	14.8	13.5	7.2	9.1	15.6	19.5	4.2
20 percent to 49 percent	7.1	9.0	8.6	16.5	16.6	8.0	8.6	27.0	25.1	4.9
50 percent or more	11.5	12.9	14.0	34.7	20.1	14.2	17.2	37.5	79.1	9.9
Not specified	25.5	34.9	41.1	65.9	11.3	38.6	46.1	54.8	90.4	14.3
Value of goods and services:										
Less than \$750,000	25.4	32.1	35.3	71.2	45.0	30.8	35.3	57.2	57.3	8.3
\$750,000 to less than \$1 million	22.2	26.9	39.9	45.5	64.8	38.8	32.1	55.1	56.4	8.9
\$1 million to less than \$5 million	7.1	7.9	10.6	14.2	15.1	9.3	10.9	16.1	24.3	2.2
\$5 million to less than \$10 million	8.7	10.8	11.1	19.6	18.5	10.0	12.0	20.2	26.8	3.9
\$10 million to less than \$25 million	5.5	7.9	7.4	13.8	12.4	6.3	9.3	16.3	21.8	3.3
\$25 million to less than \$50 million	5.4	7.7	7.2	13.2	11.0	6.9	8.2	17.5	24.7	4.8
\$50 million to less than \$100 million	5.0	6.9	6.8	14.3	9.6	5.8	6.9	11.8	17.1	4.7
\$100 million or more	2.5	3.5	2.7	5.1	6.4	1.9	2.7	16.4	11.7	4.3
Not specified	22.7	19.8	29.9	74.0	15.8	25.2	31.0	70.5	-	13.6
Products made to military specifications:										
Yes	4.5	5.9	6.4	12.1	9.3	5.6	6.9	13.0	19.4	2.5
No	4.5	5.7	5.8	10.9	9.1	5.0	6.2	12.6	16.7	1.9
Don't know	13.1	14.8	15.6	27.3	20.6	14.8	20.5	35.8	27.0	6.3
Not specified	35.6	50.9	34.5	-	25.6	44.7	66.2	70.5	-	20.7
Prime contractor to defense agencies:										
Yes: Percent of products shipped	4.8	6.2	6.7	13.6	10.6	5.5	7.1	15.6	21.3	3.2
1 percent to 24 percent	5.6	7.2	7.7	15.5	12.3	6.4	8.4	18.0	24.7	3.7
25 percent to 74 percent	14.1	18.1	19.7	32.3	17.0	14.9	19.0	33.5	35.5	9.6
75 percent or more	15.9	20.2	10.6	31.0	23.5	16.1	11.7	51.2	42.4	14.0
Don't know	23.2	34.0	26.2	87.8	46.1	28.6	34.0	17.8	78.0	22.2
No	4.1	5.2	5.5	10.1	8.0	4.9	6.0	11.1	14.8	1.5
Don't know	13.8	16.5	17.2	20.8	26.8	14.5	22.1	35.8	38.9	8.6
Not specified	42.8	79.1	60.9	-	45.3	60.3	84.7	70.5	-	24.7
Subcontractor to defense agencies:										
Yes: Percent of products shipped	4.6	5.7	6.5	11.5	10.3	5.7	6.7	13.0	19.8	2.5
1 percent to 24 percent	5.7	6.9	8.3	13.8	13.1	6.9	8.5	17.4	25.0	3.4
25 percent to 74 percent	10.7	13.1	13.0	27.3	19.7	12.8	14.2	24.0	32.3	6.8
75 percent or more	19.6	25.3	31.7	41.8	44.5	26.1	21.7	38.2	47.5	12.2
Don't know	16.9	24.1	24.5	36.6	26.4	17.9	21.8	46.2	70.0	11.3
No	5.5	7.3	7.4	14.5	10.9	6.1	8.3	14.5	17.4	2.5
Don't know	6.3	8.1	7.4	15.5	10.7	7.4	9.4	17.6	21.8	3.3
Not specified	55.5	13.2	48.4	-	90.0	46.1	66.2	70.5	96.2	19.1
Foreign owned:										
Yes	8.6	10.7	9.9	22.6	19.2	8.2	11.8	24.4	32.9	5.7
No	3.3	4.3	4.7	8.5	6.9	4.1	5.1	9.6	12.8	1.1
Don't know	11.3	12.7	12.0	21.9	16.2	12.1	12.0	26.3	35.5	8.9
Not specified	19.8	33.2	22.8	64.0	48.3	61.9	56.6	67.3	-	17.6

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-9							
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	4.6	8.6	12.1	16.8	17.4	3.3	25.6
35, Industrial Machinery and Equipment	0.6	4.3	8.0	11.6	13.9	14.5	2.9	21.3
36, Electronic and Other Electric Equipment	0.8	4.1	6.4	9.2	10.5	10.8	3.9	26.3
37, Transportation Equipment	0.9	4.6	9.0	10.7	14.1	12.5	3.7	24.0
38, Instruments and Related Products	0.7	4.7	7.9	11.4	12.1	11.7	4.4	26.9
Age of plant:								
Less than 5 years	3.6	6.8	10.8	14.3	14.4	17.8	6.1	35.1
5 years to 14 years	2.2	4.8	7.5	10.4	10.8	12.6	3.8	21.6
15 years to 29 years	2.3	4.4	7.1	9.5	12.0	13.2	4.1	25.8
30 years or more	2.6	4.6	8.1	9.8	14.4	10.8	4.7	23.2
Not specified	14.2	35.6	56.1	42.8	12.0	66.2	16.7	30.7
Number of employees:								
Less than 20	4.7	10.0	24.2	38.2	40.0	40.8	5.9	42.9
20 to 99	1.1	3.4	6.7	9.7	11.3	13.1	2.5	15.5
100 to 499	1.4	2.9	4.4	6.8	7.9	7.9	3.6	16.9
500 to 999	2.0	3.6	3.9	5.1	6.2	8.4	6.1	9.6
1,000 or more	1.5	4.4	1.5	2.4	1.9	5.0	5.8	6.7
Not specified	16.4	42.7	43.6	45.0	12.5	66.2	19.6	92.5
Unionized plants:								
Yes	2.8	4.9	6.9	10.9	13.4	11.4	5.4	23.9
Contract in effect:								
Yes	2.8	4.9	7.0	11.1	13.6	11.5	5.5	24.3
No	22.0	24.9	28.7	65.8	51.1	11.2	34.3	63.6
No	0.7	2.6	4.6	6.2	7.4	7.8	2.0	14.2
Not specified	22.7	46.2	47.6	-	16.4	55.1	29.9	26.7
Percentage of products exported:								
None	2.4	6.2	12.0	16.5	22.9	20.6	3.8	23.4
Less than 10 percent	1.6	3.3	5.8	8.2	9.5	10.1	3.1	19.0
10 percent to 19 percent	3.1	5.4	8.1	10.8	13.4	13.4	5.9	28.9
20 percent to 49 percent	3.6	6.5	9.8	10.3	13.3	13.0	7.1	45.2
50 percent or more	7.1	12.4	16.9	20.9	26.5	21.7	13.9	17.8
Not specified	12.5	24.0	35.6	41.4	43.6	67.7	18.1	59.6
Value of goods and services:								
Less than \$750,000	7.4	14.9	35.2	82.8	39.2	51.8	9.3	58.3
\$750,000 to less than \$1 million	7.8	15.3	34.3	38.3	68.2	54.7	10.5	39.3
\$1 million to less than \$5 million	1.7	4.3	9.2	13.0	13.9	16.1	3.1	18.6
\$5 million to less than \$10 million	3.1	6.0	9.5	14.0	18.8	16.7	5.3	29.9
\$10 million to less than \$25 million	2.5	4.0	7.8	10.7	14.1	15.3	4.9	22.3
\$25 million to less than \$50 million	3.1	5.3	6.7	9.9	12.1	12.8	7.9	33.6
\$50 million to less than \$100 million	3.0	5.6	7.4	8.7	10.2	10.6	6.8	42.9
\$100 million or more	1.9	3.9	5.0	3.9	3.5	5.4	7.3	6.3
Not specified	11.9	26.5	42.7	31.1	33.7	54.7	14.9	63.8
Products made to military specifications:								
Yes	1.8	3.8	6.3	8.1	10.0	11.1	3.7	19.7
No	1.4	3.3	5.5	7.5	8.9	8.8	2.7	16.8
Don't know	5.2	9.5	17.0	23.3	27.1	21.5	8.0	64.0
Not specified	17.9	45.8	57.7	76.9	13.2	84.7	22.0	-

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-9—Continued							
	A	B	C	D	E	F	G	H
Prime contractor to defense agencies:								
Yes: Percent of products shipped ...	2.3	4.4	6.6	8.6	10.1	10.9	4.7	23.5
1 percent to 24 percent	2.7	4.9	7.3	10.3	12.4	13.4	5.4	29.0
25 percent to 74 percent	7.2	13.7	20.5	21.6	26.0	23.6	12.4	47.3
75 percent or more	9.3	17.2	28.6	21.3	16.6	13.3	19.0	49.4
Don't know	16.9	23.2	38.8	35.5	51.6	41.3	27.2	-
No	1.0	2.9	5.2	7.0	8.7	8.8	2.2	15.1
Don't know	6.7	10.5	19.4	29.7	25.2	32.8	10.6	54.7
Not specified	21.1	48.3	39.9	91.5	-	84.7	27.1	90.4
Subcontractor to defense agencies:								
Yes: Percent of products shipped ...	1.8	3.9	6.1	8.3	10.2	11.0	3.6	21.4
1 percent to 24 percent	2.5	4.8	7.6	10.2	13.2	13.5	4.7	28.2
25 percent to 74 percent	5.1	9.9	12.6	18.2	18.2	22.9	8.8	45.2
75 percent or more	9.4	17.3	25.1	24.1	38.8	53.1	16.3	53.8
Don't know	9.2	15.0	29.6	40.0	27.1	26.1	15.1	53.6
No	2.0	4.1	7.2	10.0	11.0	11.0	3.4	21.1
Don't know	2.6	5.0	8.1	9.8	12.3	11.5	4.4	22.8
Not specified	17.4	33.8	76.4	12.5	13.2	84.7	21.6	90.4
Foreign owned:								
Yes	4.2	7.7	11.1	11.9	17.9	21.2	7.9	53.5
No	0.6	2.4	4.4	6.3	7.2	7.4	1.8	13.2
Don't know	6.1	11.9	12.8	16.2	26.7	16.6	11.7	82.9
Not specified	14.6	25.6	52.7	34.4	10.8	54.5	21.2	59.5
Relative standard errors for table 4-10								
	A	B	C	D	E	F	G	
Major Group:								
34, Fabricated Metal Products	0.7	21.1	14.5	8.1	4.9	2.8	25.0	
35, Industrial Machinery and Equipment	0.6	29.3	12.4	7.4	4.6	2.5	20.3	
36, Electronic and Other Electric Equipment	0.8	24.4	9.1	6.2	4.1	3.3	23.8	
37, Transportation Equipment	0.9	34.5	12.9	8.0	4.8	3.1	27.5	
38, Instruments and Related Products	0.7	25.3	11.5	7.2	4.8	3.6	28.6	
Age of plant:								
Less than 5 years	3.6	35.0	14.3	9.9	6.8	5.5	29.9	
5 years to 14 years	2.2	24.1	11.5	7.3	4.9	3.4	20.5	
15 years to 29 years	2.3	22.6	10.5	6.6	4.6	3.6	24.1	
30 years or more	2.6	19.9	11.3	6.6	5.1	4.1	22.3	
Not specified	14.2	-	51.1	34.3	47.0	15.4	-	
Number of employees:								
Less than 20	4.7	50.4	43.0	19.0	11.2	5.8	34.6	
20 to 99	1.1	23.7	10.6	6.9	3.5	2.2	15.4	
100 to 499	1.4	12.6	8.1	4.2	2.9	2.9	16.6	
500 to 999	2.0	4.6	6.5	3.5	3.2	4.6	9.7	
1,000 or more	1.5	20.2	4.6	1.9	1.3	5.8	20.3	
Not specified	16.4	-	54.5	18.2	81.4	17.5	45.4	
Unionized plants:								
Yes	2.8	24.5	8.4	6.5	5.2	4.6	26.8	
Contract in effect:								
Yes	2.8	24.9	8.4	6.6	5.2	4.7	27.0	
No	22.0	12.5	61.2	38.4	47.3	30.7	12.6	
No	0.7	14.3	7.0	4.2	2.7	1.7	13.7	
Not specified	22.7	-	45.8	79.3	52.2	26.4	45.4	

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-10—Continued								
	A	B	C	D	E	F	G		
Percentage of products exported:									
None	2.4	30.0	19.9	11.5	6.4	3.5	23.7		
Less than 10 percent	1.6	18.0	9.0	5.5	3.5	2.7	17.6		
10 percent to 19 percent	3.1	30.2	10.8	7.8	5.9	4.9	27.5		
20 percent to 49 percent	3.6	30.8	11.2	8.0	7.1	5.8	46.4		
50 percent or more	7.1	55.3	25.5	13.0	12.8	12.2	12.3		
Not specified	12.5	85.0	61.8	33.9	24.7	16.5	77.4		
Value of goods and services:									
Less than \$750,000	7.4	84.8	45.4	32.6	18.9	8.7	45.3		
\$750,000 to less than \$1 million	7.8	80.0	48.5	34.2	14.9	10.3	42.7		
\$1 million to less than \$5 million	1.7	27.3	15.2	8.6	4.5	2.8	20.1		
\$5 million to less than \$10 million ...	3.1	28.1	14.3	10.2	6.3	4.7	26.7		
\$10 million to less than \$25 million ..	2.5	20.4	10.2	6.4	5.2	3.9	24.4		
\$25 million to less than \$50 million ..	3.1	24.2	11.9	6.5	5.1	6.3	34.5		
\$50 million to less than \$100 million ..	3.0	20.2	9.8	6.1	5.2	5.9	28.2		
\$100 million or more	1.9	18.7	5.7	2.7	3.1	5.7	14.1		
Not specified	11.9	-	38.9	50.5	27.9	14.0	54.0		
Products made to military specifications:									
Yes	1.8	20.2	9.1	5.6	4.0	3.2	18.4		
No	1.4	16.1	8.1	5.1	3.5	2.4	17.4		
Don't know	5.2	46.1	22.5	16.6	9.7	7.4	42.8		
Not specified	17.9	-	66.0	41.2	69.2	19.7	-		
Prime contractor to defense agencies:									
Yes: Percent of products shipped ...	2.3	19.4	9.8	6.4	4.5	3.9	24.6		
1 percent to 24 percent	2.7	23.1	11.1	7.3	5.2	4.5	29.6		
25 percent to 74 percent	7.2	41.7	27.9	19.4	13.3	10.7	39.3		
75 percent or more	9.3	22.4	17.0	19.5	16.7	15.7	52.8		
Don't know	16.9	76.7	42.4	27.5	26.1	24.6	97.8		
No	1.0	15.3	7.7	4.6	3.1	2.0	14.6		
Don't know	6.7	60.7	25.1	21.5	10.3	10.3	56.2		
Not specified	21.1	-	66.0	45.3	60.4	23.6	90.4		
Subcontractor to defense agencies:									
Yes: Percent of products shipped ...	1.8	20.8	9.5	5.7	4.1	3.1	19.7		
1 percent to 24 percent	2.5	26.9	11.9	7.0	5.1	4.0	27.9		
25 percent to 74 percent	5.1	44.8	19.5	12.7	9.7	7.8	32.5		
75 percent or more	9.4	36.6	38.7	15.4	16.5	14.6	50.4		
Don't know	9.2	39.8	28.2	16.8	16.7	13.2	46.8		
No	2.0	17.6	9.8	6.3	4.4	3.1	21.2		
Don't know	2.6	26.3	9.8	7.5	4.9	4.0	23.3		
Not specified	17.4	-	82.0	7.5	42.7	19.9	90.4		
Foreign owned:									
Yes	4.2	42.4	13.1	10.1	8.0	6.8	38.5		
No	0.6	13.5	6.7	4.1	2.6	1.6	13.0		
Don't know	6.1	39.8	19.9	11.4	11.1	10.1	82.3		
Not specified	14.6	-	64.5	53.0	34.6	17.7	66.9		
Major Group:	Relative standard errors for table 4-11								
	A	B	C	D	E	F	G	H	
	34, Fabricated Metal Products	0.7	4.2	11.7	16.4	30.2	48.1	2.6	23.0
	35, Industrial Machinery and Equipment	0.6	3.9	7.6	8.8	34.2	9.0	2.4	18.3
	36, Electronic and Other Electric Equipment	0.8	3.3	6.9	17.5	30.8	34.6	3.2	23.2
	37, Transportation Equipment	0.9	4.6	8.0	9.8	5.3	7.0	3.0	24.0
	38, Instruments and Related Products	0.7	4.2	8.0	15.7	5.8	18.7	3.4	24.1

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-11—Continued							
	A	B	C	D	E	F	G	H
Age of plant:								
Less than 5 years	3.6	6.1	12.1	28.7	58.6	8.8	5.3	25.7
5 years to 14 years	2.2	4.2	8.9	10.6	18.2	54.3	3.4	18.3
15 years to 29 years	2.3	4.1	7.9	12.8	31.6	12.8	3.5	21.4
30 years or more	2.6	4.5	6.7	7.6	4.6	9.2	4.1	22.5
Not specified	14.2	45.1	38.4	-	-	17.0	15.4	-
Number of employees:								
Less than 20	4.7	9.9	47.8	-	-	-	5.7	28.3
20 to 99	1.1	3.1	11.2	44.7	-	66.4	2.1	14.2
100 to 499	1.4	2.5	5.3	14.8	48.6	37.3	2.9	16.3
500 to 999	2.0	3.1	3.5	6.7	31.5	80.9	4.5	5.9
1,000 or more	1.5	4.4	1.9	2.6	3.6	3.7	3.9	20.3
Not specified	16.4	40.1	52.9	-	12.5	-	17.8	65.8
Unionized plants:								
Yes	2.8	4.7	5.6	7.4	4.4	12.6	4.5	25.0
Contract in effect:								
Yes	2.8	4.7	5.7	7.5	4.5	12.6	4.6	25.0
No	22.0	38.6	33.7	8.4	20.1	-	30.3	-
No	0.7	2.3	5.3	10.5	29.7	27.9	1.7	11.9
Not specified	22.7	43.4	54.3	12.5	-	-	26.5	26.7
Percentage of products exported:								
None	2.4	6.0	15.3	26.0	9.2	39.4	3.4	21.7
Less than 10 percent	1.6	3.1	6.3	11.0	28.5	12.5	2.7	14.9
10 percent to 19 percent	3.1	5.0	8.8	9.0	10.1	48.8	4.9	26.9
20 percent to 49 percent	3.6	6.0	7.1	13.2	26.1	10.7	6.0	34.5
50 percent or more	7.1	10.8	13.6	6.2	20.1	8.3	11.8	12.3
Not specified	12.5	23.3	29.9	-	-	20.1	16.7	57.8
Value of goods and services:								
Less than \$750,000	7.4	15.3	39.8	92.4	-	-	8.9	38.4
\$750,000 to less than \$1 million	7.8	14.4	50.1	-	-	-	10.1	36.9
\$1 million to less than \$5 million	1.7	4.1	15.6	65.3	-	66.4	2.7	16.7
\$5 million to less than \$10 million	3.1	5.3	14.5	48.5	-	-	4.6	25.2
\$10 million to less than \$25 million	2.5	3.9	9.5	36.9	-	-	4.1	22.3
\$25 million to less than \$50 million	3.1	4.5	7.2	20.3	71.9	-	6.2	29.3
\$50 million to less than \$100 million	3.0	4.8	6.1	13.1	49.2	29.3	5.9	17.6
\$100 million or more	1.9	4.0	2.5	4.7	9.4	23.1	5.5	6.8
Not specified	11.9	25.8	22.5	-	26.1	-	14.2	54.0
Products made to military specifications:								
Yes	1.8	3.4	6.4	11.1	34.3	25.2	3.1	16.5
No	1.4	3.0	5.8	9.4	11.9	35.1	2.3	14.7
Don't know	5.2	9.2	20.2	22.4	13.8	25.8	7.1	46.4
Not specified	17.9	49.7	43.2	-	-	-	20.5	-
Prime contractor to defense agencies:								
Yes: Percent of products shipped	2.3	3.9	6.4	6.7	17.9	8.7	3.9	21.1
1 percent to 24 percent	2.7	4.4	8.0	9.0	36.3	11.8	4.4	27.7
25 percent to 74 percent	7.2	12.2	14.3	10.2	8.8	20.1	11.0	30.5
75 percent or more	9.3	17.7	13.2	10.0	7.0	20.1	16.0	47.2
Don't know	16.9	23.9	29.3	7.0	21.8	12.8	25.1	-
No	1.0	2.7	5.7	11.1	23.5	29.2	1.9	12.8
Don't know	6.7	11.5	20.3	26.8	-	62.3	9.4	52.0
Not specified	21.1	56.6	54.8	-	-	-	24.8	90.4

See footnote at end of table.

Table D-4. Estimates of Relative Standard Errors for Tables in Materials Handling—Continued

Plant characteristic	Relative standard errors for table 4-11—Continued							
	A	B	C	D	E	F	G	H
Subcontractor to defense agencies:								
Yes: Percent of products shipped . . .	1.8	3.5	6.7	11.3	28.1	23.6	3.1	16.5
1 percent to 24 percent	2.5	4.4	8.0	14.8	32.5	9.9	4.0	20.9
25 percent to 74 percent	5.1	8.3	14.8	7.0	59.1	51.8	7.7	27.5
75 percent or more	9.4	15.7	26.8	23.9	-	-	14.0	42.1
Don't know	9.2	14.1	20.5	35.5	34.1	-	13.2	83.9
No	2.0	3.8	7.3	12.9	7.4	37.0	3.0	19.3
Don't know	2.6	4.5	8.6	11.8	15.1	22.5	3.9	20.4
Not specified	17.4	38.6	39.9	-	-	-	20.4	90.4
Foreign owned:								
Yes	4.2	7.2	10.0	11.3	15.6	60.4	6.8	38.8
No	0.6	2.2	5.0	9.1	12.5	16.8	1.5	11.4
Don't know	6.1	9.4	10.2	20.7	71.9	24.4	10.6	25.0
Not specified	14.6	26.8	33.1	45.4	54.1	62.3	19.3	69.9

- Represents zero.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control

Plant characteristic	Relative standard errors for table 5-1							
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	4.5	7.0	8.7	10.2	9.2	4.6	31.6
35, Industrial Machinery and Equipment	0.6	4.0	6.5	8.9	10.1	9.3	4.9	31.2
36, Electronic and Other Electric Equipment	0.8	4.4	6.0	7.4	8.0	7.9	5.6	28.9
37, Transportation Equipment	0.9	5.2	7.6	8.7	8.8	10.1	4.6	37.4
38, Instruments and Related Products	0.7	4.7	6.4	9.3	9.5	10.1	6.3	44.4
Age of plant:								
Less than 5 years	3.6	6.8	9.3	10.8	13.7	12.5	7.8	58.0
5 years to 14 years	2.2	4.5	6.7	8.2	9.2	9.0	5.3	27.3
15 years to 29 years	2.3	4.8	5.8	8.0	8.5	9.1	5.4	29.3
30 years or more	2.6	4.9	6.6	7.2	9.6	8.5	6.4	32.6
Not specified	14.2	42.6	74.4	86.1	60.9	46.0	15.6	-
Number of employees:								
Less than 20	4.7	8.8	17.0	25.2	31.3	28.0	7.0	34.6
20 to 99	1.1	3.2	5.6	7.4	8.2	7.3	3.5	23.3
100 to 499	1.4	3.3	3.7	4.8	5.9	5.7	5.8	26.9
500 to 999	2.0	4.4	4.1	4.7	4.0	6.8	10.7	8.4
1,000 or more	1.5	3.3	4.3	1.5	4.1	2.0	9.7	7.2
Not specified	16.4	34.8	44.7	25.1	49.2	49.5	23.0	92.5
Unionized plants:								
Yes	2.8	5.2	6.2	7.9	9.0	9.6	7.4	30.4
Contract in effect:								
Yes	2.8	5.2	6.3	8.0	9.1	9.7	7.6	30.4
No	22.0	35.4	23.7	47.9	38.5	65.2	43.7	-
No	0.7	2.6	3.8	4.9	5.7	5.3	2.9	19.7
Not specified	22.7	47.4	49.0	16.4	81.4	50.7	30.4	26.7
Percentage of products exported:								
None	2.4	5.9	9.9	12.6	12.4	11.4	4.8	31.8
Less than 10 percent	1.6	3.5	4.8	6.2	7.1	7.0	4.2	20.1
10 percent to 19 percent	3.1	5.5	7.5	9.0	10.2	11.1	8.5	31.9
20 percent to 49 percent	3.6	7.1	8.0	8.9	12.0	9.4	11.1	50.1
50 percent or more	7.1	13.3	17.6	17.1	16.6	24.9	18.0	14.7
Not specified	12.5	24.9	31.6	65.1	43.6	38.5	19.0	86.0
Value of goods and services:								
Less than \$750,000	7.4	14.4	26.0	39.2	39.5	34.2	10.2	69.0
\$750,000 to less than \$1 million	7.8	14.7	27.1	38.9	31.7	37.9	11.9	62.7
\$1 million to less than \$5 million	1.7	4.0	7.2	9.5	10.5	9.7	4.1	29.7
\$5 million to less than \$10 million	3.1	5.7	8.5	10.8	13.2	11.2	7.4	33.3
\$10 million to less than \$25 million	2.5	4.4	6.2	8.0	9.7	8.3	7.3	25.5
\$25 million to less than \$50 million	3.1	5.5	6.5	7.6	9.1	9.4	15.7	12.2
\$50 million to less than \$100 million	3.0	6.8	5.6	6.7	7.9	8.4	14.0	47.5
\$100 million or more	1.9	4.6	4.6	4.8	4.1	3.8	15.5	10.8
Not specified	11.9	22.8	54.2	28.9	37.3	24.7	17.0	-
Products made to military specifications:								
Yes	1.8	4.2	5.0	6.3	7.3	7.0	5.8	23.2
No	1.4	3.2	4.9	5.7	7.3	7.0	3.5	22.0
Don't know	5.2	9.5	14.5	17.5	17.4	16.3	10.4	56.2
Not specified	17.9	47.4	39.2	60.1	61.0	84.7	22.5	94.7
Prime contractor to defense agencies:								
Yes: Percent of products shipped	2.3	4.6	5.6	6.9	8.0	8.8	6.7	24.4
1 percent to 24 percent	2.7	5.1	6.6	7.9	9.3	10.4	7.6	27.0
25 percent to 74 percent	7.2	15.2	12.9	19.9	14.3	22.3	21.4	46.6
75 percent or more	9.3	18.1	16.6	26.5	32.0	11.8	22.6	-
Don't know	16.9	22.8	32.6	32.6	35.5	39.7	35.7	94.7
No	1.0	2.9	4.4	5.5	6.4	5.8	3.1	20.7
Don't know	6.7	12.6	12.7	23.7	21.0	18.1	13.7	20.2
Not specified	21.1	61.0	51.2	-	67.5	84.7	24.2	-

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables In Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-1—Continued							
	A	B	C	D	E	F	G	H
Subcontractor to defense agencies:								
Yes: Percent of products shipped	1.8	4.2	5.0	6.4	7.1	6.9	6.0	23.4
1 percent to 24 percent	2.5	5.2	6.3	8.3	8.9	8.5	7.3	33.2
25 percent to 74 percent	5.1	10.5	10.6	13.1	15.8	15.6	15.6	35.2
75 percent or more	9.4	21.2	19.7	20.7	26.4	29.3	27.1	15.1
Don't know	9.2	15.7	24.8	23.4	26.4	23.1	20.1	29.9
No	2.0	4.1	6.2	7.5	9.1	9.0	4.1	25.9
Don't know	2.6	4.8	7.0	8.3	10.5	9.2	5.7	33.8
Not specified	17.4	45.5	50.3	89.5	50.6	61.0	20.6	-
Foreign owned:								
Yes	4.2	8.1	9.5	10.2	12.1	13.9	12.7	54.5
No	0.6	2.4	3.7	4.7	5.6	5.1	2.7	17.8
Don't know	6.1	14.4	10.6	12.1	14.7	17.1	18.1	58.0
Not specified	14.6	29.8	43.5	51.5	46.5	44.9	21.5	-
Relative standard errors for table 5-2								
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	2.8	8.8	22.6	50.9	14.1	4.1	28.1
35, Industrial Machinery and Equipment	0.6	2.5	7.8	14.9	13.4	6.6	4.4	36.9
36, Electronic and Other Electric Equipment	0.8	2.5	6.4	12.5	14.6	5.7	5.3	29.4
37, Transportation Equipment	0.9	3.6	6.7	9.4	24.8	8.9	4.2	33.7
38, Instruments and Related Products	0.7	2.8	7.1	12.0	24.2	3.4	5.7	31.4
Age of plant:								
Less than 5 years	3.6	4.8	11.3	21.9	50.1	17.9	7.4	45.1
5 years to 14 years	2.2	3.2	7.5	14.1	18.5	7.4	4.8	24.3
15 years to 29 years	2.3	3.3	6.7	14.3	9.0	6.6	5.1	33.4
30 years or more	2.6	3.6	6.2	6.3	19.1	5.6	6.0	28.3
Not specified	14.2	33.0	39.1	17.0	-	17.0	16.5	63.7
Number of employees:								
Less than 20	4.7	7.2	67.3	-	-	-	6.7	42.6
20 to 99	1.1	2.2	8.6	33.5	57.1	78.4	3.1	21.3
100 to 499	1.4	1.9	4.0	12.8	45.9	21.5	5.6	22.7
500 to 999	2.0	3.3	3.0	6.1	20.9	10.6	9.6	11.6
1,000 or more	1.5	2.1	2.8	2.4	10.6	2.3	8.6	5.8
Not specified	16.4	33.2	39.8	81.2	-	-	21.9	76.0
Unionized plants:								
Yes	2.8	3.9	5.4	7.5	14.2	3.0	6.9	27.5
Contract in effect:								
Yes	2.8	3.9	5.5	7.7	14.2	3.0	7.1	27.5
No	22.0	26.9	27.2	5.4	-	-	38.7	-
No	0.7	1.7	4.5	9.1	17.3	6.3	2.7	18.2
Not specified	22.7	38.3	34.7	11.9	-	-	32.7	53.1
Percentage of products exported:								
None	2.4	4.3	12.1	21.0	8.4	7.9	4.5	25.8
Less than 10 percent	1.6	2.4	5.5	10.1	24.2	3.5	4.0	21.4
10 percent to 19 percent	3.1	4.0	7.6	17.3	17.3	15.3	7.8	33.4
20 percent to 49 percent	3.6	4.7	7.7	8.1	12.1	7.9	9.8	61.9
50 percent or more	7.1	9.5	12.9	10.1	12.1	6.1	20.2	63.6
Not specified	12.5	18.7	40.7	-	60.7	20.1	19.4	63.2
Value of goods and services:								
Less than \$750,000	7.4	11.9	42.4	-	-	-	10.0	67.1
\$750,000 to less than \$1 million	7.8	11.2	63.3	88.0	-	-	12.0	39.5
\$1 million to less than \$5 million	1.7	2.9	11.9	48.6	-	-	3.8	27.7
\$5 million to less than \$10 million	3.1	4.1	11.7	48.8	27.2	15.1	6.8	43.4
\$10 million to less than \$25 million	2.5	3.2	6.5	27.5	40.6	78.4	7.0	25.9
\$25 million to less than \$50 million	3.1	3.8	6.2	13.8	55.4	33.8	14.8	23.1
\$50 million to less than \$100 million	3.0	4.6	4.8	12.1	26.1	9.2	12.5	31.3
\$100 million or more	1.9	3.9	3.4	3.7	10.0	2.8	14.2	6.1
Not specified	11.9	19.6	23.4	33.6	12.5	26.5	16.4	61.5

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-2—Continued								
	A	B	C	D	E	F	G	H	
Products made to military specifications:									
Yes.....	1.8	2.7	5.7	8.9	13.4	3.1	5.2	27.1	
No	1.4	2.3	5.1	10.5	20.9	6.5	3.2	20.0	
Don't know	5.2	7.1	14.1	26.7	5.9	14.1	9.7	56.5	
Not specified	17.9	36.0	32.7	24.8	-	-	22.7	76.0	
Prime contractor to defense agencies:									
Yes: Percent of products shipped	2.3	3.2	6.2	8.4	17.1	3.3	6.1	24.9	
1 percent to 24 percent.....	2.7	3.6	7.5	12.4	26.0	4.1	6.8	36.0	
25 percent to 74 percent.....	7.2	9.6	13.7	13.0	8.9	7.0	19.3	42.5	
75 percent or more.....	9.3	14.4	22.5	8.2	9.8	7.8	22.2	52.6	
Don't know.....	16.9	18.5	24.0	8.7	12.8	-	34.9	-	
No	1.0	1.9	4.9	10.1	16.4	6.3	2.9	19.1	
Don't know	6.7	9.4	12.2	9.4	7.2	9.2	12.5	77.5	
Not specified	21.1	48.2	51.4	24.8	-	-	25.3	76.0	
Subcontractor to defense agencies:									
Yes: Percent of products shipped	1.8	2.6	5.6	9.3	12.9	3.4	5.4	31.4	
1 percent to 24 percent.....	2.5	3.4	7.3	13.2	17.4	4.0	6.6	42.1	
25 percent to 74 percent.....	5.1	6.9	11.2	12.0	5.2	5.7	13.2	36.8	
75 percent or more.....	9.4	12.3	20.8	20.1	7.3	7.1	25.9	10.2	
Don't know.....	9.2	11.3	23.1	17.9	48.0	17.8	20.0	97.5	
No	2.0	3.1	6.3	13.3	18.6	5.3	3.9	23.4	
Don't know	2.6	3.6	7.2	11.2	31.4	15.1	5.4	28.8	
Not specified	17.4	34.5	31.7	14.1	-	-	21.1	76.0	
Foreign owned:									
Yes.....	4.2	5.5	8.3	18.5	37.4	8.8	12.1	48.5	
No	0.6	1.5	4.3	6.8	11.1	4.7	2.5	16.7	
Don't know	6.1	8.9	10.8	6.4	5.4	5.9	16.8	41.9	
Not specified	14.6	22.7	44.7	7.5	-	12.5	20.9	76.0	
	Relative standard errors for table 5-3								
	A	B	C	D	E	F	G	H	I
Major Group:									
34, Fabricated Metal Products.....	0.7	3.7	7.8	14.3	27.5	45.7	73.6	3.4	24.6
35, Industrial Machinery and Equipment	0.6	3.4	7.4	11.1	24.7	51.0	-	3.4	20.5
36, Electronic and Other Electric Equipment	0.8	3.3	5.7	9.8	33.3	40.2	89.5	4.0	21.0
37, Transportation Equipment	0.9	4.6	7.2	9.4	11.4	58.8	10.9	3.7	29.1
38, Instruments and Related Products	0.7	4.1	6.9	9.9	20.0	67.5	61.9	4.2	23.6
Age of plant:									
Less than 5 years.....	3.6	5.5	11.8	15.4	28.1	83.4	12.5	6.2	28.6
5 years to 14 years.....	2.2	3.9	6.9	12.3	31.7	47.5	75.8	4.1	19.9
15 years to 29 years	2.3	4.1	6.2	8.5	22.9	32.2	-	4.2	22.6
30 years or more.....	2.6	4.6	5.6	8.9	9.6	44.6	47.7	4.8	21.8
Not specified	14.2	33.8	66.1	94.3	-	-	-	16.2	88.3
Number of employees:									
Less than 20	4.7	8.9	28.1	69.0	-	97.5	-	6.1	31.6
20 to 99	1.1	2.8	7.5	13.6	37.8	51.6	63.0	2.6	15.7
100 to 499	1.4	2.7	3.6	6.9	15.3	28.5	49.5	3.7	16.5
500 to 999	2.0	3.3	4.0	4.4	13.5	7.7	12.5	5.1	10.6
1,000 or more	1.5	5.2	1.4	3.6	2.0	9.3	14.0	6.1	5.6
Not specified	16.4	35.9	45.1	70.3	-	-	-	20.5	-
Unionized plants:									
Yes.....	2.8	5.2	5.8	7.5	7.7	24.8	59.3	5.4	20.7
Contract in effect:									
Yes.....	2.8	5.3	5.9	7.5	7.9	24.8	59.3	5.5	20.7
No	22.0	34.3	40.4	25.6	7.8	-	-	33.0	-
No	0.7	2.1	4.3	7.1	17.9	40.0	66.1	2.2	12.6
Not specified	22.7	36.3	66.0	45.4	-	-	-	30.4	26.7

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-3—Continued								
	A	B	C	D	E	F	G	H	I
Percentage of products exported:									
None	2.4	5.1	11.5	19.9	25.6	77.8	33.5	4.1	20.7
Less than 10 percent	1.6	3.0	4.9	7.3	16.8	49.0	58.6	3.2	14.8
10 percent to 19 percent	3.1	4.8	7.7	12.0	18.5	55.1	58.7	6.1	26.6
20 percent to 49 percent	3.6	6.0	7.0	10.4	11.0	9.9	-	7.0	38.3
50 percent or more	7.1	11.0	14.5	18.3	38.0	-	-	15.2	54.5
Not specified	12.5	26.5	33.9	41.8	-	-	-	15.9	62.8
Value of goods and services:									
Less than \$750,000	7.4	14.0	37.3	37.0	-	-	-	9.5	37.3
\$750,000 to less than \$1 million	7.8	12.9	36.9	64.9	12.6	-	96.0	11.1	36.3
\$1 million to less than \$5 million	1.7	3.5	11.2	18.7	45.9	53.4	83.5	3.2	21.2
\$5 million to less than \$10 million	3.1	5.1	10.7	19.3	58.7	82.8	86.9	5.3	25.6
\$10 million to less than \$25 million	2.5	3.9	6.3	11.9	25.0	48.7	13.2	5.2	18.9
\$25 million to less than \$50 million	3.1	4.9	5.5	11.0	20.0	41.2	-	8.6	30.8
\$50 million to less than \$100 million	3.0	5.3	5.6	7.6	10.2	36.4	86.8	7.8	24.4
\$100 million or more	1.9	4.7	3.4	3.7	2.2	8.3	14.0	6.5	19.2
Not specified	11.9	25.6	40.8	41.7	40.8	-	12.5	15.3	36.3
Products made to military specifications:									
Yes	1.8	3.3	5.2	8.1	16.1	58.0	51.8	4.1	21.6
No	1.4	3.0	5.0	7.7	17.3	46.7	50.6	2.7	14.4
Don't know	5.2	8.5	15.7	17.7	17.9	12.5	-	8.1	29.2
Not specified	17.9	37.0	65.7	9.2	-	-	-	21.3	-
Prime contractor to defense agencies:									
Yes: Percent of products shipped	2.3	3.9	5.8	8.1	13.2	59.2	41.7	4.8	19.1
1 percent to 24 percent	2.7	4.4	6.9	10.3	12.4	59.2	68.5	5.4	21.9
25 percent to 74 percent	7.2	11.9	14.7	15.0	14.6	-	75.8	14.9	39.7
75 percent or more	9.3	15.3	18.7	6.8	46.9	-	10.0	20.8	59.9
Don't know	16.9	19.0	28.4	31.3	10.9	-	-	26.9	-
No	1.0	2.5	4.6	7.1	18.9	45.4	56.8	2.4	14.2
Don't know	6.7	10.3	15.5	21.6	7.5	-	-	11.2	38.6
Not specified	21.1	46.8	65.7	-	-	-	-	24.4	-
Subcontractor to defense agencies:									
Yes: Percent of products shipped	1.8	3.2	5.3	8.2	16.2	51.5	53.3	4.2	22.6
1 percent to 24 percent	2.5	4.0	6.7	9.6	25.7	46.5	60.8	5.2	33.6
25 percent to 74 percent	5.1	7.9	11.6	15.1	18.9	85.9	86.8	10.6	35.8
75 percent or more	9.4	14.4	18.8	32.4	15.1	78.0	15.1	20.7	54.2
Don't know	9.2	14.2	15.8	27.7	17.9	-	-	15.0	91.2
No	2.0	3.9	6.2	10.0	18.3	54.5	7.4	3.4	18.0
Don't know	2.6	4.5	7.2	9.6	28.3	56.3	70.2	4.4	18.1
Not specified	17.4	43.6	70.6	70.1	-	-	-	19.4	-
Foreign owned:									
Yes	4.2	6.7	8.9	13.5	19.8	59.0	12.5	8.7	38.6
No	0.6	2.0	4.0	6.3	14.2	37.6	46.4	2.0	12.0
Don't know	6.1	10.9	9.5	12.8	5.4	12.5	12.5	13.3	47.5
Not specified	14.6	29.1	43.2	49.8	12.5	-	-	18.2	-
Relative standard errors for table 5-4									
	A	B	C	D	E	F	G	H	
Major Group:									
34, Fabricated Metal Products	0.7	9.1	7.3	5.8	7.5	37.0	3.3	38.2	
35, Industrial Machinery and Equipment	0.6	9.6	7.5	6.0	5.7	32.7	3.4	39.5	
36, Electronic and Other Electric Equipment	0.8	9.4	5.8	5.1	6.0	24.3	3.9	27.4	
37, Transportation Equipment	0.9	9.5	6.4	6.6	8.2	61.0	3.5	26.9	
38, Instruments and Related Products	0.7	12.9	7.2	5.9	6.4	28.8	4.4	32.6	

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-4—Continued							
	A	B	C	D	E	F	G	H
Age of plant:								
Less than 5 years	3.6	15.5	10.0	8.2	8.9	48.4	6.0	59.7
5 years to 14 years	2.2	9.9	7.2	5.8	6.2	24.1	4.0	22.0
15 years to 29 years	2.3	9.8	6.5	5.3	6.3	19.6	4.2	31.8
30 years or more	2.6	8.6	6.1	6.0	7.1	28.8	4.8	30.5
Not specified	14.2	17.0	68.8	51.2	50.3	-	16.1	51.8
Number of employees:								
Less than 20	4.7	26.4	24.6	18.7	12.7	61.0	5.9	33.7
20 to 99	1.1	8.4	6.4	4.8	4.7	22.3	2.6	24.1
100 to 499	1.4	6.0	3.8	3.5	4.2	19.5	4.0	22.8
500 to 999	2.0	6.6	2.8	3.9	5.2	31.7	6.9	15.4
1,000 or more	1.5	1.6	2.3	4.0	2.1	6.6	10.1	8.3
Not specified	16.4	-	34.5	47.7	52.0	-	21.2	-
Unionized plants:								
Yes	2.8	7.4	6.3	5.7	8.1	21.2	5.4	27.6
Contract in effect:								
Yes	2.8	7.5	6.4	5.8	8.1	21.2	5.5	27.6
No	22.0	45.0	39.4	26.0	38.3	-	32.6	-
Not specified	0.7	6.1	4.1	3.4	3.7	17.8	2.2	18.6
Percentage of products exported:								
None	2.4	12.8	10.3	8.6	8.5	48.3	3.9	27.6
Less than 10 percent	1.6	7.3	5.0	4.2	5.1	22.6	3.2	24.5
10 percent to 19 percent	3.1	11.7	7.4	6.6	6.9	30.0	6.2	37.3
20 percent to 49 percent	3.6	11.3	8.2	7.1	8.7	34.6	7.4	35.6
50 percent or more	7.1	22.6	16.2	14.7	13.6	24.8	14.7	-
Not specified	12.5	55.2	36.9	26.6	40.5	-	16.4	-
Value of goods and services:								
Less than \$750,000	7.4	35.7	34.1	28.2	22.1	77.3	8.9	41.4
\$750,000 to less than \$1 million	7.8	37.1	32.4	30.6	19.2	67.6	10.2	47.0
\$1 million to less than \$5 million	1.7	10.7	8.1	6.5	5.8	29.6	3.2	32.1
\$5 million to less than \$10 million	3.1	13.5	9.4	7.3	7.9	33.8	5.5	45.9
\$10 million to less than \$25 million	2.5	8.8	6.0	5.5	6.1	30.4	5.3	30.8
\$25 million to less than \$50 million	3.1	10.2	6.5	5.5	7.3	27.3	9.4	29.5
\$50 million to less than \$100 million	3.0	8.5	5.6	5.3	8.8	33.8	9.4	21.4
\$100 million or more	1.9	3.9	2.9	4.1	6.7	26.3	10.2	18.8
Not specified	11.9	29.0	24.7	30.5	31.3	-	15.3	86.7
Products made to military specifications:								
Yes	1.8	7.9	5.1	4.6	5.6	21.7	4.2	30.1
No	1.4	7.3	5.3	4.3	4.6	23.3	2.6	20.3
Don't know	5.2	17.8	15.0	10.9	13.2	70.2	8.5	64.5
Not specified	17.9	91.5	48.7	55.0	68.1	-	20.5	-
Prime contractor to defense agencies:								
Yes: Percent of products shipped	2.3	9.3	5.9	5.0	6.0	24.1	4.9	21.8
1 percent to 24 percent	2.7	10.9	6.9	5.9	6.8	27.3	5.5	24.5
25 percent to 74 percent	7.2	17.4	14.1	12.4	17.9	60.9	15.8	58.2
75 percent or more	9.3	31.3	19.7	16.7	22.5	60.7	19.5	58.8
Don't know	16.9	43.8	34.0	23.2	28.1	82.3	28.4	-
No	1.0	6.2	4.7	3.9	4.2	21.5	2.3	21.0
Don't know	6.7	23.5	13.8	11.2	17.2	61.4	11.3	62.8
Not specified	21.1	91.5	81.4	65.7	72.2	-	24.3	-
Subcontractor to defense agencies:								
Yes: Percent of products shipped	1.8	7.7	5.3	4.5	5.4	21.9	4.3	21.4
1 percent to 24 percent	2.5	9.3	6.6	5.9	6.6	23.2	5.3	30.3
25 percent to 74 percent	5.1	17.9	11.4	9.3	13.3	52.1	11.2	40.4
75 percent or more	9.4	27.9	20.7	20.3	20.6	56.7	21.4	44.0
Don't know	9.2	30.5	23.6	15.3	19.9	80.6	16.4	55.9
No	2.0	9.2	6.8	5.4	5.8	32.7	3.3	24.2
Don't know	2.6	10.8	6.8	6.2	7.2	29.2	4.3	31.4
Not specified	17.4	12.5	52.2	42.1	55.5	-	20.0	97.5

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-4—Continued										
	A	B	C	D	E	F	G	H			
Foreign owned:											
Yes.....	4.2	15.0	9.3	7.3	9.5	51.8	9.2	33.6			
No	0.6	5.6	3.9	3.3	3.6	16.9	1.9	17.8			
Don't know	6.1	18.5	11.1	10.1	16.4	54.2	14.2	63.6			
Not specified	14.6	61.9	33.3	32.2	43.7	-	18.6	93.4			
	Relative standard errors for table 5-5										
	A	B	C	D	E	F	G	H	I	J	K
Major Group:											
34, Fabricated Metal Products.....	0.7	3.7	6.8	15.6	20.1	49.7	11.8	74.1	92.5	3.5	23.9
35, Industrial Machinery and Equipment	0.6	3.3	7.6	14.9	19.9	16.1	4.4	8.2	17.5	3.5	21.3
36, Electronic and Other Electric Equipment	0.8	3.3	6.1	11.1	15.5	30.5	25.9	9.8	7.9	4.1	27.4
37, Transportation Equipment	0.9	4.3	7.6	9.6	11.3	9.5	5.0	4.9	8.3	3.7	28.8
38, Instruments and Related Products	0.7	3.8	7.8	12.2	11.6	7.9	3.7	46.2	6.5	4.4	23.4
Age of plant:											
Less than 5 years.....	3.6	5.7	10.3	16.8	27.4	53.1	17.8	38.5	92.5	6.2	30.9
5 years to 14 years.....	2.2	3.8	7.1	13.6	18.6	37.5	11.6	9.7	16.0	4.1	22.1
15 years to 29 years	2.3	3.9	6.8	12.7	13.3	17.1	14.9	6.9	10.1	4.3	20.1
30 years or more.....	2.6	4.4	5.7	9.2	8.5	22.2	3.0	8.5	5.1	5.1	25.5
Not specified	14.2	33.3	83.5	-	17.0	-	-	-	17.0	16.2	66.0
Number of employees:											
Less than 20	4.7	9.2	28.4	77.6	-	-	-	-	92.5	6.1	26.3
20 to 99	1.1	2.7	7.2	15.8	27.4	49.2	-	-	-	2.6	17.7
100 to 499	1.4	2.4	3.8	7.8	12.4	22.8	60.2	50.0	-	4.1	21.0
500 to 999	2.0	3.5	3.3	6.9	6.6	10.9	22.0	34.8	-	7.2	13.1
1,000 or more	1.5	3.6	3.0	4.5	4.1	2.5	2.6	3.5	5.0	5.6	5.6
Not specified	16.4	33.2	56.4	95.2	60.7	-	-	-	-	20.6	92.5
Unionized plants:											
Yes.....	2.8	4.7	5.4	11.1	9.8	7.0	8.2	8.3	5.6	5.6	30.9
Contract in effect:											
Yes.....	2.8	4.8	5.5	11.3	9.9	7.3	8.2	8.3	5.6	5.7	30.9
No	22.0	25.2	47.4	6.2	60.3	10.9	-	-	-	31.7	-
No	0.7	2.1	4.2	8.3	10.9	21.2	11.5	16.6	46.3	2.2	13.3
Not specified	22.7	37.0	68.1	20.1	12.5	-	-	-	-	31.0	26.7
Percentage of products exported:											
None	2.4	5.0	11.2	22.8	24.8	29.5	8.4	11.7	11.2	4.1	22.7
Less than 10 percent.....	1.6	2.9	5.0	11.1	12.2	26.1	4.1	9.9	72.3	3.3	17.8
10 percent to 19 percent.....	3.1	4.6	8.0	13.1	14.0	33.5	4.8	35.2	7.7	6.3	30.9
20 percent to 49 percent.....	3.6	5.7	8.3	11.1	11.5	24.5	17.6	5.5	13.0	7.6	29.2
50 percent or more.....	7.1	10.3	16.9	27.1	15.8	11.6	6.3	10.0	17.5	14.8	41.6
Not specified	12.5	22.2	31.5	50.6	6.7	12.5	-	20.1	-	18.3	56.8
Value of goods and services:											
Less than \$750,000	7.4	14.0	44.9	95.2	-	-	-	-	-	9.3	36.7
\$750,000 to less than \$1 million	7.8	14.0	40.8	79.3	88.0	-	-	-	-	10.4	39.5
\$1 million to less than \$5 million	1.7	3.6	9.2	21.1	41.5	68.0	-	-	92.5	3.3	21.9
\$5 million to less than \$10 million.....	3.1	4.9	10.7	21.2	33.1	55.3	13.9	-	-	5.4	29.6
\$10 million to less than \$25 million.....	2.5	3.7	6.5	14.9	22.3	38.4	-	84.7	-	5.4	22.6
\$25 million to less than \$50 million.....	3.1	4.5	6.0	10.4	15.7	5.9	-	32.3	-	9.9	29.0
\$50 million to less than \$100 million.....	3.0	5.0	5.6	7.9	13.3	21.5	39.6	24.8	-	9.6	25.1
\$100 million or more	1.9	4.2	3.4	6.1	3.6	5.2	2.8	3.4	5.0	8.6	5.8
Not specified	11.9	22.8	26.3	65.0	11.3	7.1	20.1	45.4	-	15.4	70.4
Products made to military specifications:											
Yes.....	1.8	3.2	5.1	10.9	10.9	22.2	10.8	9.8	6.5	4.3	22.0
No	1.4	2.8	5.3	8.6	12.2	16.8	4.3	16.6	46.4	2.7	15.2
Don't know	5.2	8.2	14.6	20.7	27.2	6.2	24.8	7.3	-	8.5	44.7
Not specified	17.9	42.6	60.9	24.8	13.3	-	-	-	-	20.8	-

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-5—Continued										
	A	B	C	D	E	F	G	H	I	J	K
Prime contractor to defense agencies:											
Yes: Percent of products shipped	2.3	3.7	5.8	12.2	12.2	22.1	9.2	10.4	7.5	4.9	24.4
1 percent to 24 percent	2.7	4.2	6.6	15.5	18.3	31.2	18.9	14.3	9.0	5.6	30.6
25 percent to 74 percent	7.2	11.0	14.7	30.6	12.4	8.0	6.7	17.5	-	15.2	41.0
75 percent or more	9.3	15.0	22.7	16.9	10.9	5.3	8.7	10.0	9.2	21.1	57.3
Don't know	16.9	21.8	34.1	33.8	15.9	21.8	17.0	10.9	-	27.6	-
No	1.0	2.4	4.6	8.8	10.5	23.7	4.4	13.3	7.6	2.4	14.5
Don't know	6.7	10.3	17.3	19.3	18.5	31.2	42.9	-	81.2	11.7	60.9
Not specified	21.1	49.1	91.5	24.8	-	-	-	-	-	24.3	-
Subcontractor to defense agencies:											
Yes: Percent of products shipped	1.8	3.2	5.2	10.7	12.1	20.9	8.5	9.4	7.1	4.4	23.3
1 percent to 24 percent	2.5	4.1	6.7	12.9	16.8	28.3	11.8	5.3	10.1	5.3	37.9
25 percent to 74 percent	5.1	7.5	11.3	25.4	18.9	22.0	7.3	17.5	6.5	11.1	33.9
75 percent or more	9.4	13.3	19.9	46.9	30.0	21.5	5.4	51.1	-	22.5	9.0
Don't know	9.2	14.3	19.0	28.5	31.4	9.3	17.3	-	-	16.6	54.1
No	2.0	3.7	6.5	10.3	13.4	18.6	4.7	22.4	9.8	3.4	17.1
Don't know	2.6	4.3	7.3	12.0	12.3	14.1	29.0	8.9	64.9	4.5	24.8
Not specified	17.4	32.8	54.1	71.5	7.4	-	-	-	-	20.5	97.5
Foreign owned:											
Yes	4.2	6.4	8.6	16.8	15.5	43.0	7.1	12.1	24.8	9.1	17.5
No	0.6	2.0	4.0	8.0	9.3	18.1	7.7	10.3	40.9	2.0	12.8
Don't know	6.1	9.7	13.7	13.9	10.3	5.5	10.3	9.4	14.1	14.5	34.1
Not specified	14.6	24.0	33.8	43.4	10.8	-	17.0	-	-	19.2	91.8
Relative standard errors for table 5-6											
	A	B	C	D	E	F	G	H	I	J	
Major Group:											
34, Fabricated Metal Products	7.3	9.4	12.3	11.7	15.1	17.1	19.9	10.1	15.9	19.5	
35, Industrial Machinery and Equipment	6.9	9.6	14.9	12.7	14.7	17.8	19.3	9.2	14.4	16.1	
36, Electronic and Other Electric Equipment	6.1	9.3	11.9	9.4	11.3	14.3	19.5	7.8	13.1	18.6	
37, Transportation Equipment	6.5	9.0	14.3	10.4	14.0	17.6	22.9	8.3	14.7	17.3	
38, Instruments and Related Products	7.5	12.7	15.4	11.7	12.6	19.3	21.9	9.8	15.3	17.8	
Age of plant:											
Less than 5 years	10.7	15.3	25.0	14.5	17.8	21.8	29.7	15.0	21.0	24.7	
5 years to 14 years	6.8	10.0	14.7	10.4	13.3	17.3	21.0	9.3	14.2	17.3	
15 years to 29 years	6.6	9.0	12.2	10.8	13.3	14.3	17.5	8.2	12.5	17.1	
30 years or more	6.3	8.7	11.1	9.5	10.9	12.0	17.6	7.9	12.5	13.6	
Not specified	35.1	52.9	73.9	17.0	17.0	88.0	-	59.5	69.9	84.1	
Number of employees:											
Less than 20	16.7	24.7	39.8	31.1	35.7	97.5	41.0	23.5	73.5	65.5	
20 to 99	6.0	8.5	11.6	11.0	13.0	15.0	16.0	8.3	12.7	17.1	
100 to 499	4.2	5.8	7.9	6.8	8.0	10.9	12.9	5.5	8.7	10.2	
500 to 999	3.7	4.8	8.8	5.1	5.7	12.5	27.6	3.8	8.6	6.2	
1,000 or more	2.6	3.3	2.8	2.6	3.7	3.6	4.3	3.9	8.0	2.1	
Not specified	34.0	39.8	50.5	83.4	-	58.6	-	45.7	72.0	-	
Unionized plants:											
Yes	5.7	7.7	10.5	9.4	8.0	11.4	18.3	7.0	12.6	14.7	
Contract in effect:											
Yes	5.8	7.8	10.5	8.4	8.1	11.5	18.3	7.1	12.8	14.9	
No	37.9	49.6	7.3	81.2	51.2	34.9	-	46.0	57.6	9.8	
No	4.1	5.9	8.5	6.7	8.5	10.0	12.0	5.6	8.6	10.9	
Not specified	46.7	44.5	-	80.4	-	-	93.1	44.1	-	20.1	

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-6—Continued									
	A	B	C	D	E	F	G	H	I	J
Percentage of products exported:										
None	9.8	13.4	18.3	17.4	19.3	25.3	27.2	13.2	21.8	26.7
Less than 10 percent	4.9	7.0	9.9	8.5	10.0	12.5	14.9	6.4	9.8	12.0
10 percent to 19 percent	7.8	12.6	13.5	11.5	13.2	15.8	19.2	10.0	16.1	17.5
20 percent to 49 percent	8.4	11.1	17.0	11.8	13.6	14.0	23.8	10.1	17.4	17.3
50 percent or more	13.3	17.1	24.9	19.4	23.2	29.0	48.1	16.8	22.4	29.2
Not specified	28.5	45.6	52.8	47.1	81.0	55.2	82.2	32.4	70.9	36.8
Value of goods and services:										
Less than \$750,000	26.0	47.4	59.9	44.6	57.6	69.2	92.3	40.7	55.3	-
\$750,000 to less than										
\$1 million	22.2	32.0	45.5	42.0	54.6	92.1	67.0	32.9	47.7	75.3
\$1 million to less than										
\$5 million	7.3	10.4	15.0	13.7	17.1	19.6	18.0	10.4	17.0	24.5
\$5 million to less than										
\$10 million	9.3	14.3	18.5	15.8	17.4	25.5	26.9	12.6	17.9	25.3
\$10 million to less than										
\$25 million	6.2	8.5	13.2	10.4	12.8	16.8	17.9	8.7	14.2	15.0
\$25 million to less than										
\$50 million	6.3	8.9	12.5	10.1	11.7	15.2	17.8	7.7	14.5	15.3
\$50 million to less than										
\$100 million	5.7	7.9	11.8	8.5	10.1	16.3	22.1	7.4	10.7	12.9
\$100 million or more	3.5	5.2	5.5	3.2	3.7	8.8	19.2	4.0	8.3	5.2
Not specified	21.3	38.7	85.4	35.2	28.5	6.3	-	25.0	61.4	7.1
Products made to military specifications:										
Yes	5.1	7.4	10.3	8.3	10.1	12.8	15.0	6.8	11.1	12.7
No	5.2	7.5	10.3	7.7	8.8	11.9	15.6	6.7	10.2	13.0
Don't know	14.8	17.2	20.8	20.6	29.2	24.1	29.9	19.0	30.1	31.5
Not specified	43.6	39.2	-	-	13.3	-	-	47.8	-	65.8
Prime contractor to defense agencies:										
Yes: Percent of products shipped	5.8	8.6	12.2	8.6	9.9	14.3	17.4	7.2	13.4	14.0
1 percent to 24 percent	6.8	10.1	14.3	10.2	12.3	17.5	23.5	8.5	15.5	16.1
25 percent to 74 percent	13.5	19.6	19.1	18.2	17.7	28.3	21.6	17.5	35.4	24.8
75 percent or more	14.2	15.3	9.9	23.7	7.5	24.9	27.4	12.0	47.2	6.8
Don't know	27.8	36.4	43.4	43.6	61.7	60.0	64.3	30.3	45.2	56.2
No	4.6	6.3	8.7	7.5	9.0	10.7	12.4	6.0	8.7	11.5
Don't know	17.7	25.6	32.4	25.3	34.6	27.5	50.8	17.5	40.5	30.0
Not specified	48.4	59.2	-	-	-	-	-	47.9	68.9	-
Subcontractor to defense agencies:										
Yes: Percent of products shipped	5.1	7.3	10.3	7.9	9.8	12.8	14.6	6.8	10.6	12.9
1 percent to 24 percent	6.3	9.1	13.5	9.9	11.8	16.6	16.9	8.0	12.5	16.5
25 percent to 74 percent	11.9	16.5	19.0	15.8	18.9	24.7	35.2	16.5	27.6	25.8
75 percent or more	21.0	25.0	41.0	33.7	36.8	41.9	35.2	29.1	44.2	29.0
Don't know	21.3	31.1	38.6	32.3	43.5	45.6	52.5	26.3	29.7	47.8
No	6.3	9.7	12.8	10.0	11.3	13.9	19.9	7.9	12.6	12.8
Don't know	7.7	9.9	13.0	10.5	13.6	16.0	21.0	10.3	16.4	22.8
Not specified	60.1	52.1	97.5	67.7	13.2	12.5	-	76.2	91.7	-
Foreign owned:										
Yes	9.5	12.7	22.8	13.3	13.7	18.6	22.9	10.0	17.5	21.3
No	3.9	5.5	7.4	6.3	7.7	9.6	11.7	5.3	8.2	10.0
Don't know	13.5	14.4	18.4	11.8	11.1	14.9	36.4	14.4	21.4	18.2
Not specified	38.5	35.0	66.1	64.6	37.7	93.5	-	43.3	50.1	-

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-7											
	A	B	C	D	E	F	G	H	I	J	K	L
Major Group:												
34, Fabricated Metal Products	4.8	6.7	8.1	9.1	8.9	22.1	16.0	15.6	16.7	21.4	23.0	15.9
35, Industrial Machinery and Equipment	4.4	6.3	7.7	9.4	7.6	21.5	16.3	11.8	19.6	20.9	22.1	13.0
36, Electronic and Other Electric Equipment	4.0	6.2	6.8	9.5	7.5	32.5	14.8	11.2	16.5	20.7	22.1	14.3
37, Transportation Equipment	4.6	7.0	8.5	10.2	8.1	22.4	19.3	12.9	16.7	16.1	22.3	12.2
38, Instruments and Related Products	5.0	7.2	9.1	13.1	8.8	35.0	16.5	12.6	18.6	21.5	27.2	16.1
Age of plant:												
Less than 5 years	7.2	10.0	11.5	16.1	11.2	55.2	24.2	16.8	25.3	32.4	24.1	22.2
5 years to 14 years	4.7	6.5	7.9	9.7	8.2	33.6	15.7	10.9	19.4	19.8	20.7	14.6
15 years to 29 years	4.6	6.4	7.7	8.6	7.5	24.1	11.6	10.6	14.9	18.2	21.4	13.7
30 years or more	4.5	6.2	7.2	8.6	7.8	15.4	15.3	12.8	16.6	22.2	27.4	11.9
Not specified	43.4	56.9	70.3	-	71.3	-	17.0	53.3	88.0	-	61.7	-
Number of employees:												
Less than 20	10.2	13.9	15.9	21.2	18.1	77.0	33.6	35.6	40.0	40.2	71.3	23.2
20 to 99	3.6	5.0	6.0	7.9	6.4	26.0	12.5	11.0	14.2	14.9	17.0	11.4
100 to 499	2.9	4.3	5.1	5.6	4.9	14.2	9.9	6.5	12.0	13.2	14.8	9.5
500 to 999	3.1	4.6	6.2	5.5	4.7	9.9	7.1	3.5	5.7	30.9	10.8	8.6
1,000 or more	2.2	1.8	1.5	4.0	5.2	3.4	22.0	3.6	2.5	4.1	4.1	2.1
Not specified	32.5	43.4	54.3	53.5	88.7	-	86.7	42.6	72.6	-	66.2	61.9
Unionized plants:												
Yes	4.7	6.6	8.2	7.7	8.2	12.3	13.7	10.8	16.9	20.6	24.3	14.0
Contract in effect:												
Yes	4.7	6.7	7.9	7.8	8.3	12.6	13.8	11.0	15.2	20.6	24.3	13.3
No	46.4	44.9	56.6	53.3	44.8	53.9	82.3	43.0	84.0	-	-	70.2
No	2.7	3.8	4.6	6.0	4.8	61.7	9.5	7.5	10.7	12.7	13.3	8.3
Not specified	44.3	59.8	84.7	91.5	-	-	-	62.4	-	-	-	14.2
Percentage of products exported:												
None	6.2	8.7	9.9	12.3	10.3	39.4	22.9	18.4	21.6	23.6	25.2	15.4
Less than 10 percent	3.4	4.7	5.6	6.7	6.1	17.2	10.3	8.6	14.0	15.1	17.0	10.2
10 percent to 19 percent	5.4	8.1	9.2	10.4	8.0	22.5	20.3	12.2	17.9	22.2	25.6	16.5
20 percent to 49 percent	6.2	8.5	9.9	13.4	10.5	36.5	19.2	17.3	20.1	24.8	28.4	16.5
50 percent or more	11.9	14.7	20.3	29.6	15.6	53.8	51.6	23.4	38.8	78.8	43.7	26.1
Not specified	23.6	29.1	43.3	56.8	40.1	90.4	30.2	37.8	53.3	95.2	9.8	50.7
Value of goods and services:												
Less than \$750,000	17.4	21.9	24.7	31.1	23.1	-	93.1	49.3	55.6	54.5	77.5	38.1
\$750,000 to less than \$1 million	15.7	20.2	24.2	28.9	26.8	-	56.1	55.0	50.7	53.2	96.9	51.4
\$1 million to less than \$5 million	4.4	6.1	7.2	9.7	7.9	32.9	15.7	13.9	19.0	17.7	23.9	13.5
\$5 million to less than \$10 million	6.2	8.4	10.0	11.9	10.6	32.1	18.8	16.2	22.3	26.2	23.7	17.6
\$10 million to less than \$25 million	4.2	6.0	6.7	7.6	7.9	19.9	12.7	9.8	14.4	23.3	23.8	15.1
\$25 million to less than \$50 million	4.9	6.8	8.1	10.1	7.9	22.7	15.7	10.4	22.8	22.2	20.4	14.8
\$50 million to less than \$100 million	5.1	6.8	8.8	9.1	7.5	6.9	16.2	10.5	14.1	23.2	19.2	9.8
\$100 million or more	2.8	2.7	3.8	5.6	4.7	6.4	13.5	9.2	3.0	16.6	17.0	5.6
Not specified	26.6	21.2	24.9	30.7	57.9	-	65.7	43.5	82.2	41.3	52.7	39.2
Products made to military specifications:												
Yes	3.7	5.2	6.3	7.9	6.6	16.6	12.1	9.8	13.8	15.5	16.6	10.7
No	3.5	4.9	5.7	6.7	5.8	19.2	11.3	8.6	12.5	16.4	17.3	10.3
Don't know	9.5	11.9	16.1	17.5	14.8	46.9	28.6	21.0	35.0	31.0	43.5	26.4
Not specified	37.7	66.7	60.0	-	63.8	-	95.2	44.7	89.2	-	-	95.2

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-7—Continued											
	A	B	C	D	E	F	G	H	I	J	K	L
Prime contractor to defense agencies:												
Yes: Percent of products shipped....	4.2	5.7	7.0	8.8	7.3	19.9	13.1	9.2	14.1	15.2	22.4	12.4
1 percent to 24 percent.....	4.9	6.7	8.2	9.9	8.1	23.7	14.5	10.5	16.2	18.2	26.6	14.8
25 percent to 74 percent.....	11.3	11.6	12.8	20.8	23.0	35.2	42.0	19.2	33.2	21.7	43.4	36.0
75 percent or more.....	14.9	19.7	28.9	28.6	14.1	10.0	23.0	21.7	31.0	21.9	58.8	31.2
Don't know.....	24.3	37.2	39.2	58.5	38.0	-	53.6	40.3	55.6	76.0	-	48.5
No.....	3.0	4.3	5.1	6.2	5.2	16.2	10.0	8.1	11.7	13.9	14.1	9.3
Don't know.....	11.9	14.9	20.7	24.5	16.6	44.2	39.8	24.9	31.6	35.4	40.4	28.9
Not specified.....	50.0	75.2	66.0	-	-	-	-	62.4	-	-	-	-
Subcontractor to defense agencies:												
Yes: Percent of products shipped....	3.7	5.4	6.3	8.1	6.7	16.3	12.2	9.4	14.8	16.5	17.6	10.6
1 percent to 24 percent.....	4.7	6.6	7.8	10.0	8.5	19.2	15.9	11.2	19.1	24.0	22.2	13.2
25 percent to 74 percent.....	9.1	11.6	14.5	17.7	14.6	33.0	22.4	24.6	33.0	27.8	34.1	22.6
75 percent or more.....	16.1	24.2	24.2	29.7	22.5	16.7	46.0	38.6	34.8	28.9	59.6	37.4
Don't know.....	14.8	22.6	22.8	38.1	21.6	52.8	41.6	30.4	43.4	61.6	46.8	40.6
No.....	4.4	5.9	6.8	8.2	7.4	24.7	14.2	11.5	16.3	18.5	21.3	12.2
Don't know.....	5.0	6.8	8.7	9.5	7.5	23.9	14.2	11.4	16.1	19.1	18.6	15.5
Not specified.....	41.2	56.0	84.7	-	64.3	-	26.7	62.4	-	-	13.2	12.5
Foreign owned:												
Yes.....	7.6	10.9	12.7	15.2	11.3	24.4	21.0	16.1	30.4	30.3	25.9	20.6
No.....	2.5	3.6	4.3	5.4	4.6	14.1	8.9	7.1	9.7	11.7	13.2	7.9
Don't know.....	9.2	11.0	13.7	16.3	13.9	34.0	22.0	16.5	29.3	22.2	38.8	18.9
Not specified.....	29.0	40.7	57.6	55.4	37.5	-	35.9	33.5	-	-	13.2	17.0
Relative standard errors for table 5-8												
	A	B	C	D	E	F	G	H	I	J		
Major Group:												
34, Fabricated Metal Products.....	5.5	3.6	7.8	11.2	11.1	14.2	11.2	6.7	20.7	2.8		
35, Industrial Machinery and Equipment.....	5.4	3.2	6.8	9.5	11.5	11.0	8.8	7.2	20.0	3.0		
36, Electronic and Other Electric Equipment.....	3.9	2.7	5.9	9.2	9.4	9.7	7.7	7.3	18.8	3.5		
37, Transportation Equipment.....	5.2	3.5	6.2	9.6	12.4	13.5	9.7	8.5	21.0	3.1		
38, Instruments and Related Products.....	4.7	3.5	7.1	10.5	12.3	11.0	8.2	9.8	20.3	3.7		
Age of plant:												
Less than 5 years.....	6.9	5.3	9.6	13.6	14.5	14.7	12.4	11.6	26.9	5.6		
5 years to 14 years.....	5.1	3.7	7.0	10.2	10.5	9.7	8.4	7.6	18.2	3.7		
15 years to 29 years.....	4.8	3.6	6.3	9.3	10.4	9.6	8.2	7.0	17.3	3.8		
30 years or more.....	4.9	3.6	6.0	10.1	10.5	11.0	8.5	7.5	14.2	4.4		
Not specified.....	52.9	36.4	39.6	83.9	48.6	14.4	58.3	65.1	94.1	15.7		
Number of employees:												
Less than 20.....	14.1	11.2	24.6	26.5	29.4	24.0	25.2	18.0	43.0	5.7		
20 to 99.....	4.5	2.9	6.2	8.7	9.2	9.5	8.2	6.0	15.8	2.3		
100 to 499.....	2.7	2.0	3.8	5.9	6.2	7.1	5.2	4.5	14.0	3.4		
500 to 999.....	3.0	2.2	3.0	4.5	7.6	6.7	4.4	4.9	10.6	6.0		
1,000 or more.....	2.2	1.6	2.7	3.2	4.6	2.2	2.0	4.0	9.1	9.4		
Not specified.....	34.2	24.4	43.6	81.4	43.3	45.4	45.1	70.5	95.2	21.0		
Unionized plants:												
Yes.....	4.8	3.7	5.8	8.7	10.3	10.6	8.7	7.3	18.5	4.9		
Contract in effect:												
Yes.....	4.9	3.7	5.8	8.8	10.4	10.9	8.8	7.5	19.1	5.0		
No.....	29.5	23.3	39.0	37.3	70.9	47.8	42.7	36.9	30.5	31.1		
No.....	3.0	2.0	4.0	6.2	6.5	6.3	5.2	4.4	11.5	1.9		
Not specified.....	35.7	31.2	62.1	56.9	84.7	67.4	56.5	64.2	-	28.5		
Percentage of products exported:												
None.....	7.7	5.3	10.3	13.5	14.6	18.0	13.7	9.5	24.5	3.7		
Less than 10 percent.....	3.8	2.7	5.0	7.7	7.7	8.0	6.7	5.4	13.3	2.9		
10 percent to 19 percent.....	5.5	4.2	7.3	10.8	11.4	11.2	8.8	9.3	19.7	5.5		
20 percent to 49 percent.....	6.3	4.7	7.2	10.5	15.5	12.4	8.3	10.3	23.0	6.6		
50 percent or more.....	10.6	9.1	13.1	22.1	22.3	16.5	16.5	22.1	56.0	13.1		
Not specified.....	32.8	25.4	31.8	43.7	40.8	8.0	35.8	41.1	50.6	15.6		

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-8—Continued									
	A	B	C	D	E	F	G	H	I	J
Value of goods and services:										
Less than \$750,000	27.2	17.9	29.2	54.9	58.2	28.4	41.4	33.6	47.2	8.6
\$750,000 to less than \$1 million	20.1	16.1	34.5	33.2	37.2	34.9	31.0	31.2	64.8	9.9
\$1 million to less than \$5 million	5.7	3.9	8.4	10.9	11.5	12.2	10.8	7.3	20.7	2.9
\$5 million to less than \$10 million	6.9	5.0	9.1	14.0	13.2	15.9	10.9	9.7	21.5	4.9
\$10 million to less than \$25 million	4.3	3.5	6.0	10.2	12.2	10.1	7.8	7.2	18.5	4.5
\$25 million to less than \$50 million	4.8	3.7	6.2	9.2	10.6	11.2	8.3	7.6	21.2	7.6
\$50 million to less than \$100 million	4.5	3.5	5.9	7.7	9.1	11.1	7.1	7.5	16.7	8.0
\$100 million or more	2.8	2.0	2.6	4.0	7.6	3.7	3.3	5.9	16.3	7.5
Not specified	24.9	19.6	34.7	48.8	38.4	35.6	42.4	41.3	28.5	14.9
Products made to military specifications:										
Yes	3.8	2.8	5.1	7.7	8.5	9.5	6.6	5.8	15.2	3.8
No	3.9	2.7	4.8	7.7	8.1	7.2	6.3	5.8	14.4	2.4
Don't know	10.7	7.7	14.0	19.5	18.3	19.6	23.2	14.8	29.1	7.8
Not specified	36.9	30.7	32.8	67.5	63.9	-	60.9	67.1	24.8	21.3
Prime contractor to defense agencies:										
Yes: Percent of products shipped	4.2	3.3	5.2	8.4	9.9	9.5	7.0	7.9	13.6	4.4
1 percent to 24 percent	4.9	3.9	6.0	9.9	11.3	10.8	8.1	8.8	15.6	4.9
25 percent to 74 percent	10.9	9.0	14.0	19.2	27.5	20.4	19.0	18.7	33.5	14.1
75 percent or more	13.4	11.8	8.2	13.2	20.0	41.1	16.3	32.8	6.0	17.3
Don't know	25.9	18.1	30.7	31.4	38.4	67.1	32.8	30.5	78.0	26.6
No	3.4	2.3	4.6	6.9	7.1	7.1	5.9	4.7	13.2	2.1
Don't know	11.5	8.5	16.0	21.1	15.9	18.4	17.5	18.8	37.4	10.4
Not specified	45.0	39.6	14.2	67.5	60.3	68.9	81.4	67.1	24.8	24.9
Subcontractor to defense agencies:										
Yes: Percent of products shipped	3.8	2.8	5.2	7.3	9.0	9.0	6.1	5.8	14.8	3.9
1 percent to 24 percent	4.9	3.5	6.5	9.0	10.7	11.1	7.5	7.2	18.7	4.8
25 percent to 74 percent	7.7	6.7	11.0	15.5	20.6	17.0	14.3	14.3	26.5	10.0
75 percent or more	15.3	12.3	19.6	27.9	38.3	41.5	20.7	20.6	61.0	20.1
Don't know	17.6	12.1	22.2	27.1	30.1	25.4	30.2	23.9	35.2	15.6
No	4.9	3.6	6.1	10.5	9.6	9.5	9.0	7.3	15.2	3.0
Don't know	5.6	4.0	7.3	10.7	10.7	10.2	9.4	8.0	20.5	4.0
Not specified	55.2	34.6	67.5	42.8	85.2	-	48.7	55.6	89.8	19.9
Foreign owned:										
Yes	6.8	5.4	8.3	11.9	13.1	16.0	12.8	10.8	24.4	8.1
No	2.8	1.9	3.8	5.9	6.3	6.0	5.0	4.2	10.9	1.7
Don't know	9.4	7.6	12.3	21.0	21.9	16.7	15.0	12.7	31.6	12.4
Not specified	37.4	22.5	55.3	49.3	71.8	63.7	43.9	41.3	56.0	19.5
Relative standard errors for table 5-9										
	A	B	C	D	E	F	G	H		
Major Group:										
34, Fabricated Metal Products	0.7	5.5	7.3	7.9	9.1	8.5	4.6		26.0	
35, Industrial Machinery and Equipment	0.6	5.1	6.2	8.1	8.9	8.5	4.6		25.0	
36, Electronic and Other Electric Equipment	0.8	5.3	6.0	6.9	7.0	7.0	5.5		24.4	
37, Transportation Equipment	0.9	5.8	8.0	8.3	9.0	8.4	4.7		28.3	
38, Instruments and Related Products	0.7	5.5	6.6	8.4	8.8	9.4	6.3		32.6	
Age of plant:										
Less than 5 years	3.6	7.7	9.0	11.1	10.5	12.0	7.9		38.7	
5 years to 14 years	2.2	5.3	6.5	7.5	8.8	8.1	5.1		23.0	
15 years to 29 years	2.3	5.5	6.4	7.2	8.0	7.6	5.2		26.5	
30 years or more	2.6	5.5	7.0	7.8	8.1	7.5	6.3		21.6	
Not specified	14.2	41.6	60.3	70.6	60.8	49.4	16.3		30.7	

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-9—Continued							
	A	B	C	D	E	F	G	H
Number of employees:								
Less than 20	4.7	10.3	17.1	23.7	25.4	33.4	6.6	36.3
20 to 99	1.1	3.8	5.3	6.6	7.6	6.8	3.4	17.1
100 to 499	1.4	3.6	3.9	4.6	5.1	5.1	5.7	19.3
500 to 999	2.0	6.0	3.9	5.1	3.7	5.2	8.7	11.9
1,000 or more	1.5	4.3	4.9	3.7	1.2	3.3	8.6	7.2
Not specified	16.4	46.9	66.6	58.8	57.5	38.1	21.4	92.5
Unionized plants:								
Yes.....	2.8	6.0	6.6	7.8	7.6	7.8	7.1	20.5
Contract in effect:								
Yes.....	2.8	6.1	6.7	8.0	7.7	7.9	7.2	20.5
No	22.0	34.0	26.8	30.7	49.6	55.1	35.9	-
No	0.7	3.1	3.9	4.5	5.1	4.8	2.9	15.6
Not specified	22.7	46.2	24.1	48.6	81.4	50.7	31.0	-
Percentage of products exported:								
None	2.4	6.8	9.7	11.9	12.4	10.7	4.6	23.9
Less than 10 percent.....	1.6	3.9	5.1	5.7	6.2	6.1	4.2	20.3
10 percent to 19 percent.....	3.1	6.8	7.0	8.1	9.6	9.7	8.1	34.3
20 percent to 49 percent.....	3.6	8.0	8.2	9.4	10.0	8.7	10.5	52.5
50 percent or more.....	7.1	15.2	15.8	16.9	16.4	19.9	20.1	12.8
Not specified	12.5	29.3	27.4	29.4	40.6	61.3	19.7	51.0
Value of goods and services:								
Less than \$750,000	7.4	16.7	27.0	39.2	55.1	33.9	9.6	50.5
\$750,000 to less than \$1 million	7.8	14.6	25.8	35.2	40.8	42.4	12.0	34.8
\$1 million to less than \$5 million	1.7	4.7	7.0	8.6	9.4	8.8	4.0	21.7
\$5 million to less than \$10 million.....	3.1	6.7	8.2	9.9	11.5	10.1	7.3	34.3
\$10 million to less than \$25 million.....	2.5	5.3	5.9	7.1	8.3	7.6	7.3	27.0
\$25 million to less than \$50 million.....	3.1	6.8	6.3	7.4	7.9	8.2	14.4	45.3
\$50 million to less than \$100 million.....	3.0	8.2	5.8	6.9	7.5	7.5	12.6	37.0
\$100 million or more.....	1.9	5.2	4.9	4.5	4.2	3.7	15.5	7.2
Not specified	11.9	32.0	35.1	43.2	23.3	37.9	16.8	68.9
Products made to military specifications:								
Yes.....	1.8	4.9	5.3	5.9	6.5	6.2	5.7	21.7
No	1.4	3.7	5.0	5.7	6.4	6.2	3.4	17.5
Don't know	5.2	10.4	13.3	17.2	17.9	15.4	10.1	82.2
Not specified	17.9	42.7	13.2	47.6	75.8	60.0	22.2	-
Prime contractor to defense agencies:								
Yes: Percent of products shipped	2.3	5.3	6.0	6.3	6.8	7.3	6.6	25.1
1 percent to 24 percent.....	2.7	5.9	7.0	7.3	8.2	8.4	7.5	28.9
25 percent to 74 percent.....	7.2	16.7	15.8	14.8	14.6	17.5	20.5	55.4
75 percent or more.....	9.3	21.3	20.4	11.8	21.3	27.4	25.5	73.9
Don't know.....	16.9	30.2	29.6	26.9	42.5	34.1	31.7	-
No	1.0	3.4	4.4	5.2	5.8	5.3	3.1	16.3
Don't know.....	6.7	14.3	15.6	17.9	19.7	18.9	13.1	54.3
Not specified	21.1	62.2	45.3	81.4	81.4	66.0	25.8	90.4
Subcontractor to defense agencies:								
Yes: Percent of products shipped	1.8	4.9	5.2	5.9	6.4	6.1	5.9	26.5
1 percent to 24 percent.....	2.5	5.9	6.5	7.7	8.1	7.3	7.2	29.8
25 percent to 74 percent.....	5.1	11.5	10.8	12.0	13.8	15.0	14.8	48.6
75 percent or more.....	9.4	24.1	19.7	20.5	22.4	24.1	24.3	90.4
Don't know.....	9.2	19.6	22.9	22.5	23.6	20.9	20.7	63.2
No	2.0	4.5	6.4	7.5	8.1	7.8	4.0	20.9
Don't know.....	2.6	5.7	7.1	7.8	8.8	8.7	5.5	23.7
Not specified	17.4	62.2	67.2	54.9	46.3	50.9	21.0	90.4
Foreign owned:								
Yes.....	4.2	9.2	11.2	10.0	10.7	11.4	11.2	58.4
No	0.6	2.9	3.7	4.4	4.9	4.6	2.6	14.2
Don't know	6.1	13.0	13.0	15.5	15.6	14.3	17.9	79.2
Not specified	14.6	28.6	41.7	48.5	55.0	42.8	24.8	59.5

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-10						
	A	B	C	D	E	F	G
Major Group:							
34, Fabricated Metal Products	0.7	24.5	7.7	5.8	4.6	4.1	25.9
35, Industrial Machinery and Equipment	0.6	28.3	8.1	5.6	4.0	4.0	25.1
36, Electronic and Other Electric Equipment	0.8	24.1	6.3	4.7	4.1	4.8	24.9
37, Transportation Equipment	0.9	28.3	8.2	5.9	5.0	4.0	30.5
38, Instruments and Related Products	0.7	28.4	8.5	5.4	4.8	5.2	32.0
Age of plant:							
Less than 5 years	3.6	31.3	10.1	7.7	6.5	7.2	35.0
5 years to 14 years	2.2	23.4	7.5	5.5	4.5	4.6	22.4
15 years to 29 years	2.3	25.8	6.8	5.3	4.6	4.7	30.0
30 years or more	2.6	24.7	7.5	5.3	5.0	5.5	25.0
Not specified	14.2	-	54.7	56.1	37.0	15.8	-
Number of employees:							
Less than 20	4.7	40.6	25.7	17.1	9.5	6.4	35.4
20 to 99	1.1	20.9	6.6	4.8	3.2	3.1	18.5
100 to 499	1.4	14.3	4.7	3.2	3.0	4.5	18.3
500 to 999	2.0	18.3	4.5	3.1	4.0	7.4	8.8
1,000 or more	1.5	4.8	3.8	1.3	4.7	8.0	7.1
Not specified	16.4	-	41.1	31.2	45.1	20.4	-
Unionized plants:							
Yes	2.8	25.7	7.0	5.0	5.3	6.2	30.5
Contract in effect:							
Yes	2.8	25.7	7.1	5.1	5.3	6.3	30.5
No	22.0	-	35.0	30.1	54.5	34.3	-
No	0.7	14.2	4.4	3.2	2.5	2.5	15.9
Not specified	22.7	-	20.1	44.2	36.4	28.2	26.7
Percentage of products exported:							
None	2.4	31.7	11.4	8.7	5.6	4.3	26.3
Less than 10 percent	1.6	21.7	5.6	4.1	3.4	3.7	20.4
10 percent to 19 percent	3.1	24.5	8.3	5.9	5.9	6.8	29.9
20 percent to 49 percent	3.6	27.9	8.8	6.3	6.8	8.2	56.5
50 percent or more	7.1	39.9	17.8	13.3	11.7	17.6	17.0
Not specified	12.5	84.5	38.4	29.4	24.5	19.1	67.1
Value of goods and services:							
Less than \$750,000	7.4	50.2	38.1	29.4	16.9	9.4	41.1
\$750,000 to less than \$1 million	7.8	80.0	33.9	28.0	13.2	11.6	45.8
\$1 million to less than \$5 million	1.7	28.0	8.6	6.3	4.0	3.7	25.6
\$5 million to less than \$10 million	3.1	26.4	10.2	7.1	5.8	6.4	30.1
\$10 million to less than \$25 million	2.5	20.0	6.8	4.7	5.2	5.5	23.2
\$25 million to less than \$50 million	3.1	34.1	6.9	5.3	5.3	11.0	28.9
\$50 million to less than \$100 million	3.0	21.3	6.4	5.0	6.0	9.6	31.7
\$100 million or more	1.9	14.9	4.3	2.7	3.7	11.3	7.1
Not specified	11.9	-	25.8	22.1	24.7	15.7	47.2
Products made to military specifications:							
Yes	1.8	21.0	5.8	4.2	3.8	5.1	23.2
No	1.4	16.3	5.5	4.0	3.3	3.0	18.6
Don't know	5.2	47.2	16.2	11.9	9.1	9.3	44.4
Not specified	17.9	-	68.2	39.4	45.7	21.2	-
Prime contractor to defense agencies:							
Yes: Percent of products shipped	2.3	23.9	6.9	4.6	4.6	5.5	29.0
1 percent to 24 percent	2.7	26.9	7.9	5.3	5.3	6.3	34.9
25 percent to 74 percent	7.2	56.5	16.8	14.3	12.0	16.9	51.0
75 percent or more	9.3	10.8	25.9	10.1	17.6	21.2	53.8
Don't know	16.9	-	40.1	22.6	29.0	28.4	97.8
No	1.0	15.8	5.0	3.6	2.9	2.7	16.4
Don't know	6.7	41.9	15.8	15.1	11.0	12.9	74.3
Not specified	21.1	-	91.5	51.0	46.3	24.2	90.4

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

Plant characteristic	Relative standard errors for table 5-10—Continued							
	A	B	C	D	E	F	G	
Subcontractor to defense agencies:								
Yes: Percent of products shipped	1.8	21.6	5.7	4.2	3.9	5.1	26.9	
1 percent to 24 percent.	2.5	24.7	7.1	5.1	5.1	6.2	38.3	
25 percent to 74 percent.	5.1	53.9	12.8	9.6	8.7	13.1	47.4	
75 percent or more.	9.4	49.7	22.4	18.3	16.4	21.0	58.5	
Don't know.	9.2	24.8	20.0	20.1	15.2	19.4	62.9	
No	2.0	17.3	7.3	5.2	4.2	3.6	22.9	
Don't know	2.6	26.7	8.0	5.9	4.8	5.0	23.7	
Not specified	17.4	-	76.9	61.9	36.5	20.9	90.4	
Foreign owned:								
Yes.	4.2	32.0	10.7	7.7	7.9	9.7	44.4	
No	0.6	14.7	4.3	3.1	2.4	2.3	15.1	
Don't know	6.1	34.4	13.6	10.4	11.1	14.7	82.3	
Not specified	14.6	12.5	60.9	32.5	32.0	19.7	66.9	
	Relative standard errors for table 5-11							
	A	B	C	D	E	F	G	H
Major Group:								
34, Fabricated Metal Products	0.7	3.2	8.2	15.3	67.2	48.1	3.5	27.9
35, Industrial Machinery and Equipment.	0.6	2.9	7.2	18.1	30.3	8.9	3.8	20.3
36, Electronic and Other Electric Equipment.	0.8	2.9	5.8	12.3	33.0	33.6	4.5	25.4
37, Transportation Equipment	0.9	4.1	6.4	7.4	19.8	6.1	3.7	27.4
38, Instruments and Related Products	0.7	3.5	6.3	11.8	4.2	16.3	4.8	28.7
Age of plant:								
Less than 5 years	3.6	5.2	10.1	24.3	48.3	27.1	6.6	28.7
5 years to 14 years.	2.2	3.5	7.1	12.2	12.6	45.9	4.4	20.9
15 years to 29 years	2.3	3.6	6.5	13.2	36.9	13.3	4.5	27.8
30 years or more.	2.6	4.0	6.1	5.3	18.6	5.9	5.3	21.4
Not specified	14.2	42.1	43.5	84.7	-	17.0	15.6	-
Number of employees:								
Less than 20	4.7	8.2	34.5	-	-	-	6.2	33.0
20 to 99	1.1	2.4	7.5	33.6	54.1	87.8	2.8	16.7
100 to 499	1.4	2.1	3.9	14.3	46.5	32.9	4.3	20.5
500 to 999	2.0	3.5	3.1	4.8	20.5	63.4	5.3	31.6
1,000 or more	1.5	3.8	1.9	3.1	13.7	3.3	7.4	8.1
Not specified	16.4	37.4	35.2	84.7	-	-	20.6	65.8
Unionized plants:								
Yes.	2.8	4.1	5.0	7.7	15.7	9.5	5.8	26.9
Contract in effect:								
Yes.	2.8	4.1	5.1	7.9	16.5	9.5	6.0	26.9
No	22.0	35.6	27.5	20.0	10.3	-	33.4	-
No	0.7	1.9	4.2	8.8	27.6	21.5	2.4	13.7
Not specified	22.7	38.3	9.1	66.0	-	-	27.5	26.7
Percentage of products exported:								
None	2.4	4.8	11.3	25.5	13.9	39.4	4.0	24.4
Less than 10 percent.	1.6	2.6	5.1	11.4	28.2	9.1	3.6	17.0
10 percent to 19 percent.	3.1	4.3	8.0	10.6	22.9	52.7	6.5	32.2
20 percent to 49 percent.	3.6	5.4	6.3	10.9	17.9	8.1	8.1	37.1
50 percent or more.	7.1	10.0	14.8	18.5	8.1	7.9	16.2	17.0
Not specified	12.5	21.4	34.2	54.4	-	20.1	18.1	67.1
Value of goods and services:								
Less than \$750,000	7.4	13.9	66.0	92.4	-	-	9.2	38.4
\$750,000 to less than \$1 million	7.8	12.3	40.1	-	-	-	11.2	42.5
\$1 million to less than \$5 million	1.7	3.2	10.2	71.2	-	87.8	3.4	20.3
\$5 million to less than \$10 million.	3.1	4.3	10.6	53.0	54.1	-	6.1	26.9
\$10 million to less than \$25 million.	2.5	3.5	6.1	19.4	96.0	-	5.8	20.1
\$25 million to less than \$50 million.	3.1	4.1	5.7	14.6	46.4	24.8	10.3	38.2
\$50 million to less than \$100 million.	3.0	5.0	4.7	11.6	36.8	24.5	9.4	24.8
\$100 million or more.	1.9	3.8	2.9	4.1	12.0	17.1	9.5	7.3
Not specified	11.9	21.1	15.8	54.3	20.1	45.4	15.7	54.0

See footnote at end of table.

Table D-5. Estimates of Relative Standard Errors for Tables in Inspection and Quality Control—Continued

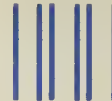
Plant characteristic	Relative standard errors for table 5-11—Continued							
	A	B	C	D	E	F	G	H
Products made to military specifications:								
Yes.....	1.8	2.9	5.1	7.3	26.1	18.3	4.7	20.2
No	1.4	2.6	5.2	11.4	18.1	23.4	2.8	15.8
Don't know	5.2	8.0	14.8	12.0	7.1	34.1	8.5	41.6
Not specified	17.9	44.7	55.1	84.7	-	-	20.8	-
Prime contractor to defense agencies:								
Yes: Percent of products shipped	2.3	3.5	5.5	6.7	18.4	7.8	5.3	26.6
1 percent to 24 percent.....	2.7	3.9	6.7	9.2	28.1	8.4	6.1	32.4
25 percent to 74 percent.....	7.2	10.5	11.8	16.4	31.8	20.1	16.2	46.8
75 percent or more.....	9.3	17.5	11.4	5.7	11.6	34.9	19.4	53.8
Don't know.....	16.9	21.3	21.7	10.9	10.9	-	30.7	-
No	1.0	2.2	4.7	10.4	26.7	26.0	2.5	13.6
Don't know	6.7	10.6	14.1	17.2	6.9	16.5	11.2	80.3
Not specified	21.1	39.8	79.1	84.7	-	-	24.2	90.4
Subcontractor to defense agencies:								
Yes: Percent of products shipped	1.8	2.8	5.2	7.6	23.6	16.3	4.7	21.1
1 percent to 24 percent.....	2.5	3.6	6.6	10.3	31.1	11.2	6.0	27.8
25 percent to 74 percent.....	5.1	7.0	11.5	9.4	46.7	51.8	12.0	32.3
75 percent or more.....	9.4	13.8	19.7	29.1	8.8	10.0	18.5	63.8
Don't know.....	9.2	13.4	19.7	29.6	57.9	16.5	18.0	96.9
No	2.0	3.4	6.3	13.2	6.8	37.0	3.5	20.3
Don't know	2.6	3.9	7.6	15.9	38.6	8.1	4.7	21.6
Not specified	17.4	36.1	41.0	66.2	-	-	20.8	90.4
Foreign owned:								
Yes.....	4.2	6.2	8.9	12.3	60.2	47.2	9.4	51.1
No	0.6	1.8	4.0	8.0	12.5	12.8	2.1	12.8
Don't know	6.1	10.1	8.6	15.2	52.8	14.2	14.1	20.8
Not specified	14.6	24.0	44.4	36.0	-	-	21.9	66.9

- Represents zero.

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